

Bayou Manchac

Bayou Paul Dredge Canal

Alligator

# Spanish Lake Restoration, LLC

## IRT Presentation

June 15, 2017

Bayou Braud Dredge Canal

First Bayou



# SPANISH LAKE RESTORATION IRT PRESENTATION

JUNE 15, 2017

## AGENDA

1. Introductions
2. SLR Presentation
  - i. SLR Mitigation Bank Overview
  - ii. Interagency Agreement
  - iii. LRAM Factors
  - iv. Hydrologic Improvement and Ecological Benefit
3. IRT Questions and Answers

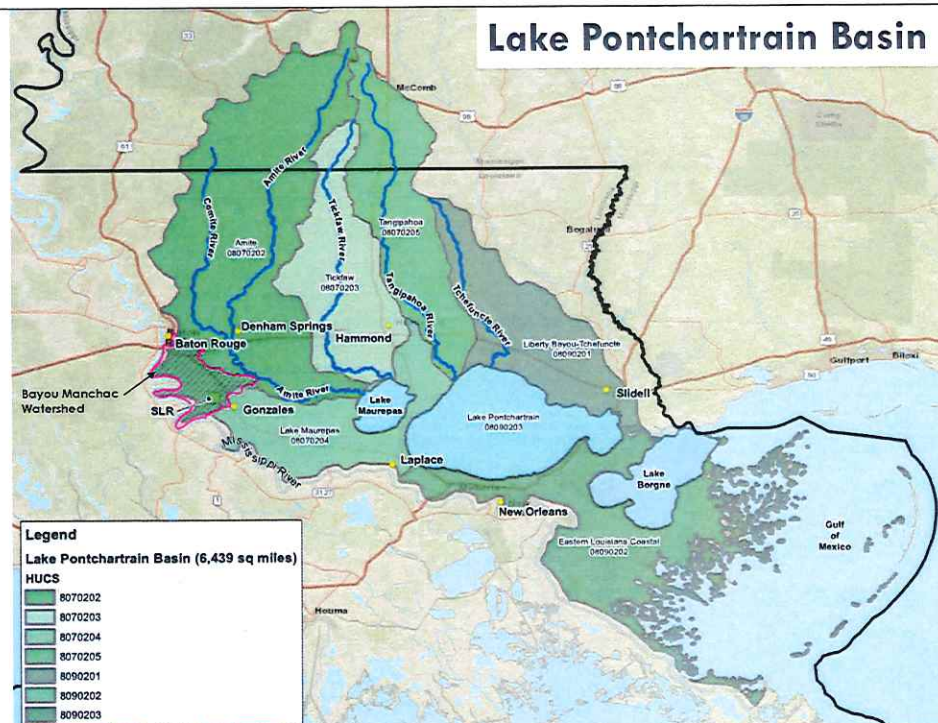
## PRESENTERS

Steve Wallace, P.E., SLR Manager

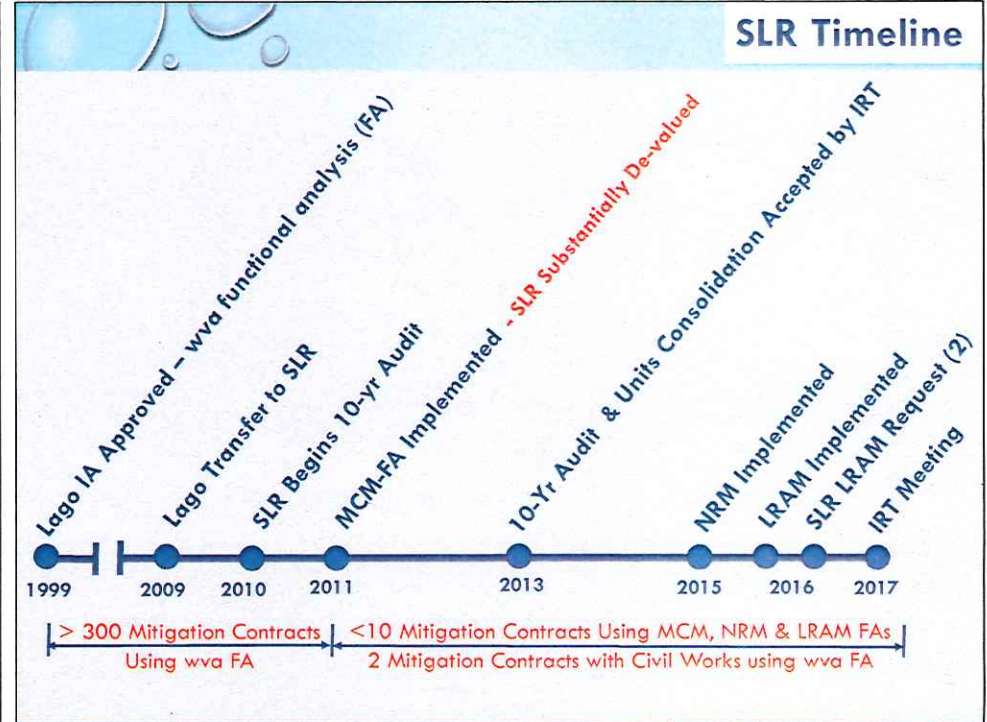
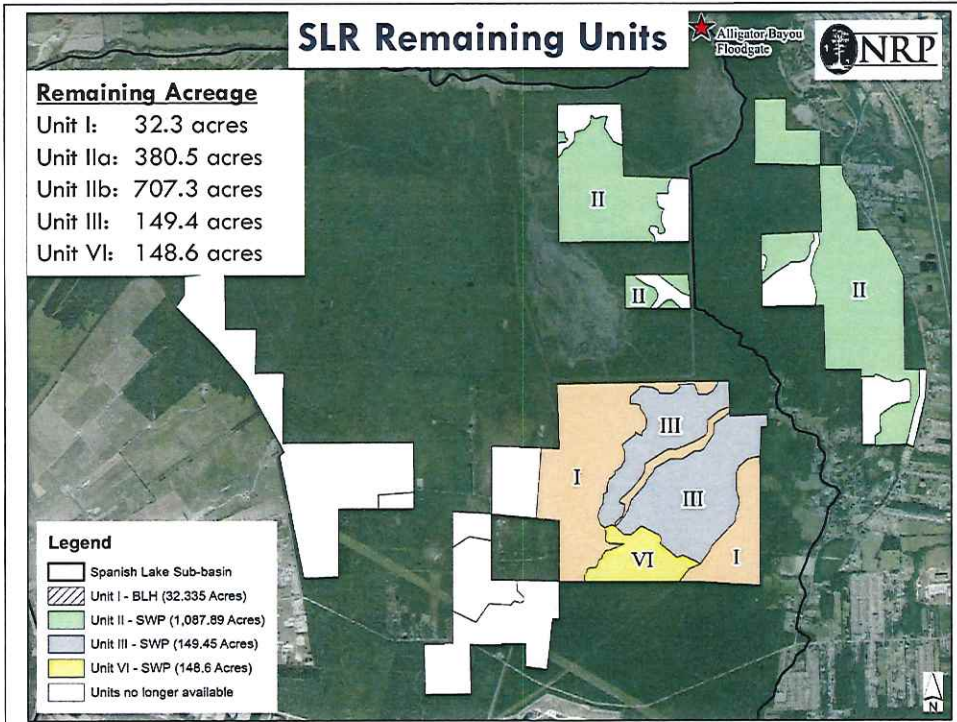
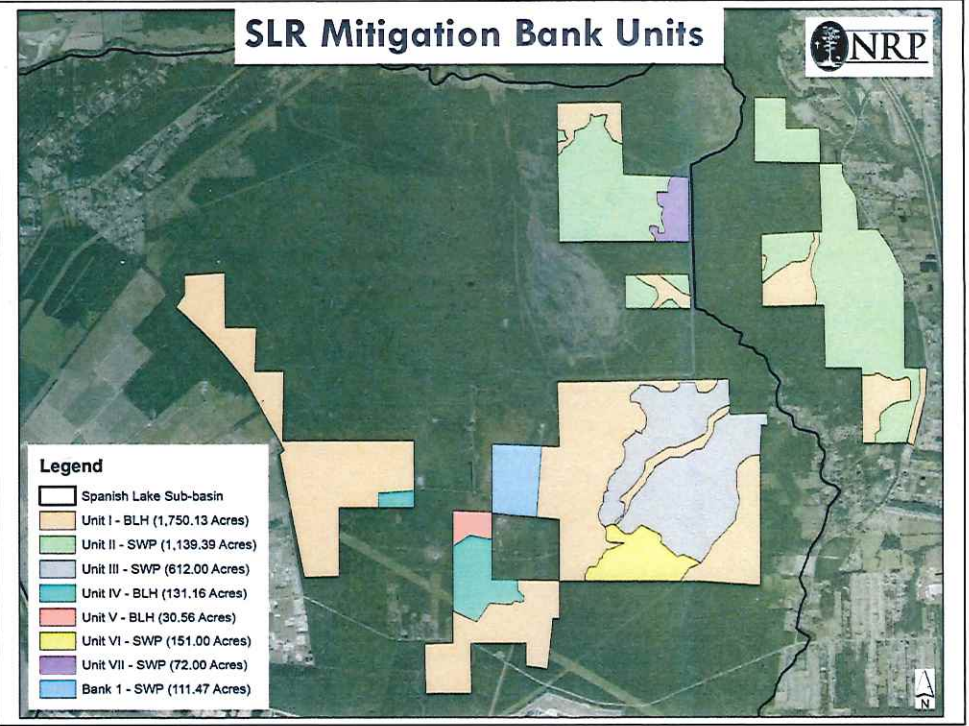
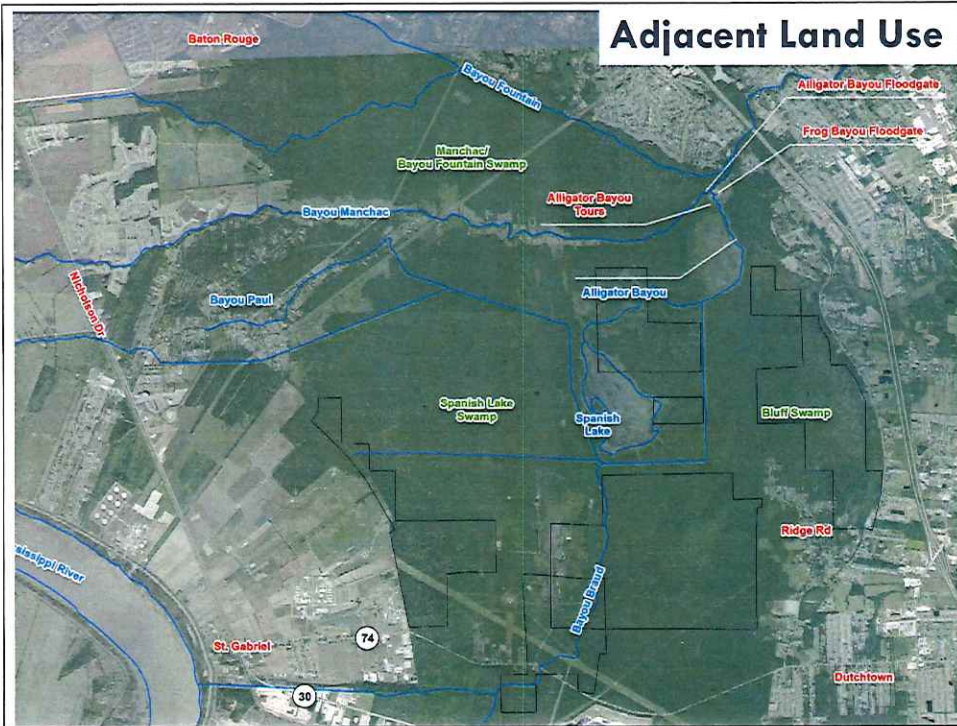
Scott Nesbit, SLR Manager

Stokka Brown, P.E., NRP Hydrology Engineer

## Lake Pontchartrain Basin









## SLR Interagency Agreement

## SLR Interagency Agreement

### General

- Developed & Approved Under 1995 MOU (USACE and EPA)
- Only bank with SWP and BLH Credits within HUC 08070202

### Excerpts:

- Page 3: Purpose of Bank is to Enhance and Preserve Productive BLH and SWP
- Page 5: Impaired Basin-wide Hydrology (AB Floodgate and other anthropogenic features) recognized as "existing conditions" as part of bank approval.
- Pages 7-11: Enhancement Units III through VIII achieved by:
  - Internal Culvert Repair/Replacements (Unit IV, V, VII, VIII)
  - Breaks In Bayou Braud Spoil Bank (Unit III, VI)
  - Vegetative Plantings and Invasive Species Control (III-VIII)
- Page 15: Preservation Units I and II:
  - Large-scale wetland within highly developed watershed → High value for Preservation
  - Demonstrable threat from proposed timber harvesting activities
- Pages 22 – 23: Addendum & Basin Wide Hydrology Improvements
  - IA can be amended for additional enhancements associated with basin-wide hydrologic improvement in preservation areas
  - Specifies, but not restricted to, Unit II

## Interagency Agreement Page 3: Purpose of Mitigation Bank

### INTERAGENCY AGREEMENT Lago Espanol, L.L.C. Lago Espanol Wetland Mitigation Bank

### III. PURPOSE AND OBJECTIVES OF THE MITIGATION BANK

The purpose of the Lago Espanol Wetland Mitigation Bank is to enhance and/or preserve productive bottomland hardwood and cypress-tupelo forested wetland ecosystems on approximately 4,046 acres of land in Ascension and Iberville Parishes as compensation for unavoidable losses of wetland functions and values as authorized by Department of the Army (DA) Section 10 and/or 404 permits. The Lago Espanol Wetland Mitigation Bank may only be used to compensate for impacts which remain after all appropriate and practicable measures have been explored by a permit applicant to avoid and minimize project-related impacts. In addition, only those wetland enhancement and preservation activities performed by Sponsor, without funding assistance from other public (state or federal) programs, may be used as mitigation. If state or federal programs are used offsite of the Mitigation Bank for the benefit of third parties and the programs' activities either directly or indirectly benefit the Mitigation Bank, then the Sponsor will not forfeit credits.

## Interagency Agreement Page 5: Impaired Basin-wide Hydrology

The ecosystem of the Spanish Lake/Bluff Swamp basin suffers from adverse hydrological conditions. Since the turn of the century, numerous human activities have cumulatively resulted in altering the natural hydrology of the basin such that adverse conditions exist. The St. Gabriel oil and gas field was discovered. Numerous roads to access drill sites were constructed, some without culverts. Of those roads where culverts were installed, the majority of these culverts are only minimally functional or nonfunctional or are insufficient in number or size. Bayous Braud and Paul were excavated to provide improved drainage. The excavated material was placed adjacent to the dredged channels and functions as barriers to sheetflow. A levee was constructed and is maintained on the east-side of Bayou Braud and Alligator Bayou and separates Bluff Swamp from the Spanish Lake area eliminating any water exchange between these areas. Water control structures were installed on bayous Alligator and Frog to control drainage from Spanish Lake and Bluff Swamp, respectively. The management of these structures has been primarily for maintenance of a set water level in Spanish Lake for recreational fishing. The overall result is what was once a large flood storage basin with little disruption in water exchange has been compartmentalized and the hydroperiods of the individual compartments vary, as do the water levels. Extended hydroperiods in areas have stressed stands of bottomland hardwoods and hindered regeneration of both hardwoods and baldcypress.



## Interagency Agreement Page 7-11: Enhancement Units III - VI

### B. ENHANCEMENT

1. Approximately 612.0 acres of baldcypress/tupelogum swamp will be enhanced through alteration of the existing hydrologic conditions. Breaks in the material deposited along the banks along Bayou Braud will be cleared to improve water exchange. Additional breaks along the Bayou's banks will be created, if necessary, to provide the appropriate degree of water exchange necessary to benefit the ecosystem. The breaks will be maintained in an open and functional capacity. The number, location and size of the breaks along the Bayou's banks will be identified in the required DA permit. A conservation servitude will be filed on the subject property in accordance with the requirements specified in Section VIII of this agreement. The enhancement of this acreage will be referred to as Unit III.

## Interagency Agreement Page 15: High Value Preservation Wetlands

Lands within the preservation portions of mitigation area currently consist of primarily mature bottomland hardwood forests and baldcypress/tupelogum swamps and are considered to have a high value as wetland and wildlife habitat. Without implementation of the mitigation features, the property is subject to silviculture activities. Subtracting the average annualized FWOP value from the FWP value and dividing the difference by the total acreage of the specific mitigation project equates to the management or mitigation potential of the eight identified mitigation areas within Lago Espanol Wetland Mitigation Bank.

## Interagency Agreement Page 15: Threat of Timber Harvest

The distributary ridges and bottomland hardwood areas have reached maturity supporting merchantable timber. The swamp acreage also supports a mixture of merchantable timber, pulpwood, and mulch. The lands contained within the mitigation bank have historically been utilized by the property owners for silviculture purposes. Unless the subject acreage is accepted into a wetland mitigation bank, the property owners will accept recent proposals for the timber rights and continue the historical silviculture land use practices. While the area would remain a functioning wetland, these silviculture practices would result in an immediate diminishment of the habitat value of the area.

## Interagency Agreement Pages 22 - 23: Addendum & Basin-wide Hydrological Improvement

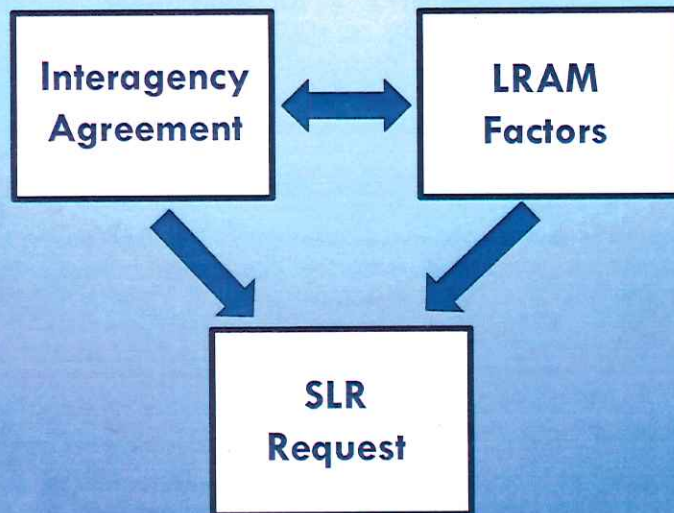
### XII. ADDENDUMS TO THE MITIGATION BANK

This agreement may be amended to extend mitigation credits for additional enhancement associated with hydrologic improvement activities to areas where the sole basis of mitigation credit is currently preservation on the Lago Espanol Wetland Mitigation Bank as agreed upon by the MBRT and Sponsor. Specifically, additional credits for Unit II may be generated through basin-wide hydrologic improvements. Management of any structures associated with the hydrologic restoration activities will be subject to the policies set forth in the addendum. A separate assessment will be conducted to determine the incremental benefit to be derived from the hydrologic restoration activity and the number of credits to be made available to Sponsor. Each addendum will immediately become part of this agreement and will be supplied to cosignatories to this agreement.

Subject to approval by the MBRT, Sponsor will be allowed the latitude to comply with new techniques, guidance, and practices. At any time, Sponsor may request minor changes/alterations be made to the overall and/or specific items of the plan. Any requested change accepted by the MBRT will become part of this agreement and be supplied to co-signatories to this agreement.



## Summary SLR Request



## LRAM Mitigation Factors

## LRAM Mitigation Factors

Factor	Option	m value
Mitigation Type	Re-Establishment	6
	Rehabilitation	5
	Enhancement	3
	Preservation	0.4
Management	None	0
	Passive	-1
	Active	-2
Negative Influences	Low	0
	Medium	-0.5
	High	-1
Size	> 500 acres	0.5
	500 : 100 acres	0
	< 100 acres	-0.5
Buffer/Upland	None	0
	Buffer/Upland Inclusions	0.2
	Restored Buffer/Uplands	0.5

## SLR Request - LRAM Factors

Factor	Option	m value
Mitigation Type	Re-Establishment	6
	Rehabilitation	5
	Enhancement	3
	Preservation	0.4
Management	None	0
	Passive	-1
	Active	-2
Negative Influences	Low	0
	Medium	-0.5
	High	-1
Size	> 500 acres	0.5
	500 : 100 acres	0
	< 100 acres	-0.5
Buffer/Upland	None	0
	Buffer/Upland Inclusions	0.2
	Restored Buffer/Uplands	0.5



### SLR Current Total LRAM Scores

Unit	Total LRAM Score	
	Current	Proposed
I	0.4	
IIa: Sp Lake	0.4	
IIb: BI Swamp	0.4	
III	2.5	
VI	2.5	

### SLR Request: Proposed Scores

Unit	Total LRAM Score	
	Current	Proposed
I	0.4	3.5
IIa: Sp Lake	0.4	3.5
IIb: BI Swamp	0.4	0.9
III	2.5	3.5
VI	2.5	3.5

#### Factors For Consideration:

- Mitigation Type
- Management
- Size

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
I						
IIa: Sp Lake						
IIb: BI Swamp						
III						
VI						

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type					
	Current	Proposed				
I	0.4					
IIa: Sp Lake	0.4					
IIb: BI Swamp	0.4					
III	3					
VI	3					



### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type					
	Current	Proposed				
I	0.4	3				
Ila: Sp Lake	0.4	3				
Ilb: BI Swamp	0.4	0.4				
III	3	3				
VI	3	3				

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management			
	Current	Proposed	Current	Proposed		
I	0.4	3	0			
Ila: Sp Lake	0.4	3	0			
Ilb: BI Swamp	0.4	0.4	0			
III	3	3	-1			
VI	3	3	-1			

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management			
	Current	Proposed	Current	Proposed		
I	0.4	3	0	0		
Ila: Sp Lake	0.4	3	0	0		
Ilb: BI Swamp	0.4	0.4	0	0		
III	3	3	-1	0		
VI	3	3	-1	0		

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
	Current	Proposed	Current	Proposed	Current	Proposed
I	0.4	3	0	0	0	
Ila: Sp Lake	0.4	3	0	0	0	
Ilb: BI Swamp	0.4	0.4	0	0	0	
III	3	3	-1	0	0.5	
VI	3	3	-1	0	0.5	



### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
	Current	Proposed	Current	Proposed	Current	Proposed
I	0.4	3	0	0	0	0.5
Ila: Sp Lake	0.4	3	0	0	0	0.5
Ilb: BI Swamp	0.4	0.4	0	0	0	0.5
III	3	3	-1	0	0.5	0.5
VI	3	3	-1	0	0.5	0.5

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
	Current	Proposed	Current	Proposed	Current	Proposed
I	0.4	3	0	0	0	0.5
Ila: Sp Lake	0.4	3	0	0	0	0.5
Ilb: BI Swamp	0.4	0.4	0	0	0	0.5
III	3	3	-1	0	0.5	0.5
VI	3	3	-1	0	0.5	0.5

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
	Current	Proposed	Current	Proposed	Current	Proposed
I	0.4	3	0	0	0	0.5
Ila: Sp Lake	0.4	3	0	0	0	0.5
Ilb: BI Swamp	0.4	0.4	0	0	0	0.5
III	3	3	-1	0	0.5	0.5
VI	3	3	-1	0	0.5	0.5

### SLR Request: Factors by Units

Unit	Factors					
	Mitigation Type		Management		Size	
	Current	Proposed	Current	Proposed	Current	Proposed
I	0.4	3	0	0	0	0.5
Ila: Sp Lake	0.4	3	0	0	0	0.5
III	3	3	-1	0	0.5	0.5
VI	3	3	-1	0	0.5	0.5



## Summary SLR Request

### Units I & IIa

Mitigation Type: **Change to "Enhancement"**  
Size: **Use "> 500 acres"**

### Units III & VI

Management: **Change to "None"**

### Units IIb

Defer Final Scoring

## LRAM Factor: Size

### D. Size

The size factor is measure of the total size of the mitigation project that will be placed under protection of a conservation servitude. The assumption of this factor is that larger tracts are less common, have a greater potential for habitat diversity, provide a greater degree of isolation and thereby offer higher quality habitat than smaller tracts. As stated in Roy et al (2010), although edge habitat produces habitat diversity and are used by many wildlife species, it is important to understand four concepts: 1) wildlife species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) edge habitat is quite available due to continual forest fragmentation from residential and/or commercial development and ongoing timber harvesting, 3) most wildlife species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts for maintaining populations.

**> 500** – Greater than 500 acres that are contiguous and protected by legal instrument.

## LRAM Factor: Size

### III. PURPOSE AND OBJECTIVES OF THE MITIGATION BANK

The purpose of the Lago Espanol Wetland Mitigation Bank is to enhance and/or preserve productive bottomland hardwood and cypress-tupelo forested wetland ecosystems on approximately 4,046 acres of land in Ascension and Iberville Parishes as compensation for unavoidable losses of wetland functions and values as authorized by Department of the Army (DA) Section 10 and/or 404 permits. The Lago Espanol Wetland Mitigation Bank may only be

## LRAM Factor: Size

Unit	Size	
	Current	Proposed
I	0	0.5
IIa: Sp Lake	0	0.5



## LRAM Factor: Project Site Management

### B. Project Site Management

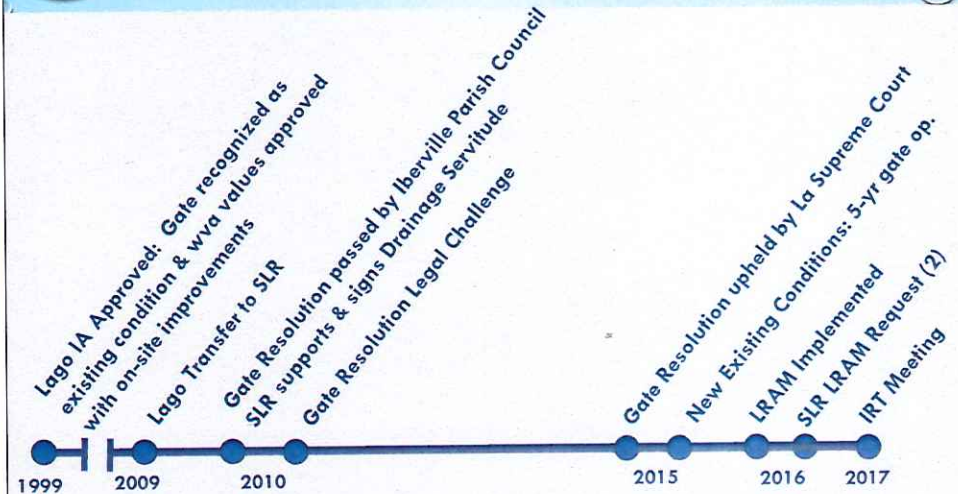
The project site management factor refers to the level of maintenance or management that is required to maintain wetland hydrology on the project site.

**None:** Project site functions in a self-sustaining manner without dependence on long-term structural management. Example: internal and external ditches rendered ineffective at onset of project; culverts exist on-site only to improve sheetflow within the project site; short term structural management with definitive time frames defined in an MBI or permittee responsible mitigation plan.

**Passive Management:** Open culverts, breaches or other passive management structures that are required for habitat restoration and require monitoring and irregular repair or replacement to maintain hydrology from off-site.

**Active Management:** Tidal exchange or overflow from adjacent waterbody under active management. Gated structures or variable crest weirs that function to regulate water levels and/or salinities working in conjunction with dikes or natural landscape features to effectively manage surface hydrology, i.e., greentree reservoirs, marsh management projects, areas within existing leveed areas.

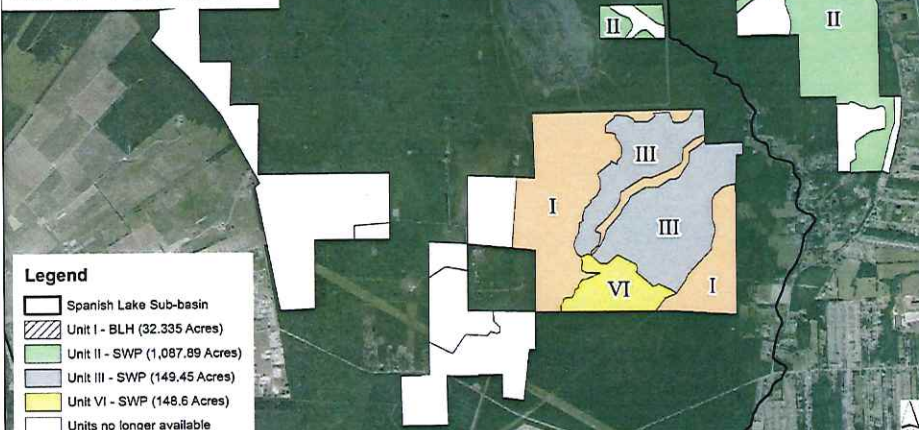
## SLR & Alligator Bayou Gate Timeline



## SLR Remaining Units

### Remaining Acreage

Unit I:	32.3 acres
Unit IIa:	380.5 acres
Unit IIb:	707.3 acres
Unit III:	149.4 acres
Unit VI:	148.6 acres



## Iberville Parish Resolution

**SPANISH LAKE/ALLIGATOR BAYOU FLOODGATE DRAINAGE AGREEMENT**

THIS DOCUMENT IS SIGNED BY RAMON JARRELL, in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on March 22, 2010.

Before the undersigned notaries, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses personally came and appeared:

The Iberville Parish Council, herein represented by its Parish Clerk, Mr. [Name], acting under the authority of Ordinance No. 2010-007 of the Parish Council, attached hereto and made a part hereof as Exhibit "A," place of business at 58050 Meridian Street, Plaquemine, Louisiana 70756 to as "Iberville Parish" and

Spanish Lake Mitigation, L.L.C., a limited liability company, laws of the State of Louisiana, having its principal place of business at Baton Rouge, Louisiana 70817, herein represented by Manager, Jay La Land Investments of Louisiana, Inc., a corporation organized under the laws of the State of Louisiana, having its principal place of business at 18019 Range, Louisiana 70810, pursuant to a Resolution of its Board of Directors adopted at the meeting held on March 17, 2010, a certified copy of which is attached hereto and made a part hereof as Exhibit "B" herein represented by President, Ramon Jarrell; and

Jarrell Holdings, L.L.C., a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 18019 Range, Louisiana 70810, herein represented by its President, Ramon Jarrell.

Spanish Lake Restoration, L.L.C., a Louisiana limited liability company, having its principal place of business at 10 Jansenville Avenue, Suite 400, Baton Rouge, Louisiana 70804, herein represented by its authorized Manager, Conservation Land Management, L.L.C., appearing before the undersigned notaries, duly authorized Manager, Scott P. Nesbitt;

First Louisiana Resources, Inc., a limited liability company of the State of Louisiana, having its principal place of business at 10 Range, Louisiana 70801, herein represented by its Manager, Leonard R. [Name] (hereinafter collectively referred to as "Property Owners").

WITNESSES:

Spanish Lake Mitigation, L.L.C. By: [Signature] Jay La Land Investments of Louisiana, Inc. By: [Signature] Jarrell Holdings, L.L.C. By: [Signature] Spanish Lake Restoration, L.L.C. By: [Signature] First Louisiana Resources, Inc. By: [Signature]

NOTARY PUBLIC/NOTARY NO. [Number] Printed Name: [Name]

ATTEST:

[Signature] KIMBERLY D. BARKER COUNCIL CLERK



### SLR Request: Factors by Units

Unit	Management	
	Current	Proposed
III	-1	0
VI	-1	0

### LRAM Factor: Mitigation Type - Enhancement

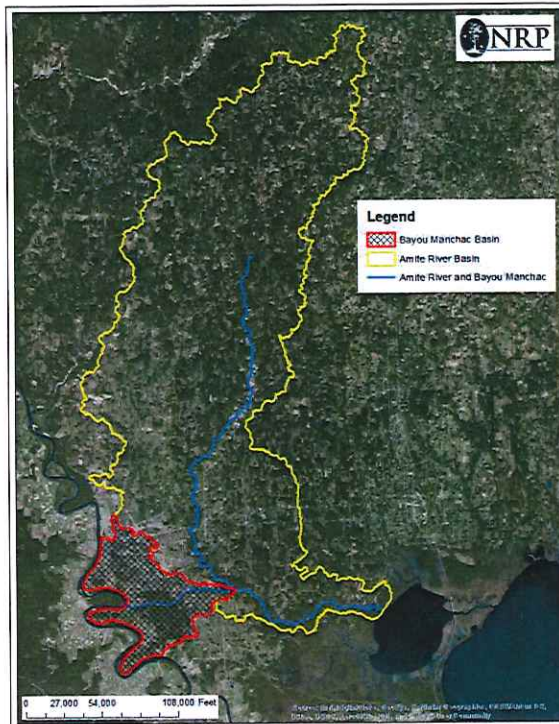
**Enhancement (Enhance).** Proposed site is a wetland that requires **modification** to heighten, intensify, or improve **specific function(s)** or to change the growth stage or composition of the vegetation present.

### SLR Request: Factors by Units

Unit	Mitigation Type	
	Current	Proposed
I	0.4	3
Ila: Sp Lake	0.4	3

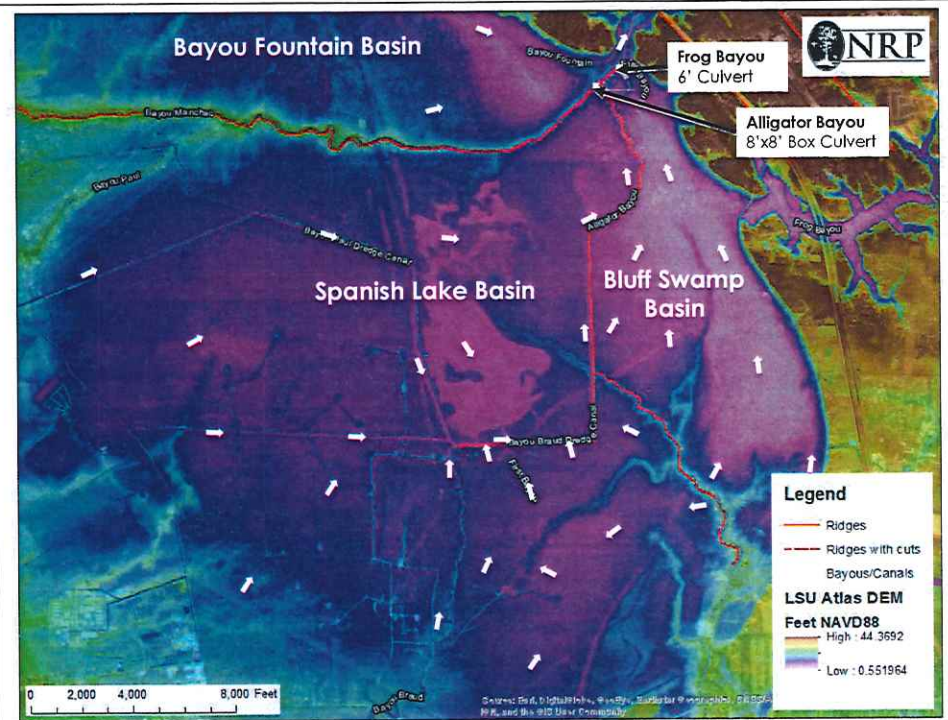
### Basin-wide Hydrologic Improvement & Ecological Benefit



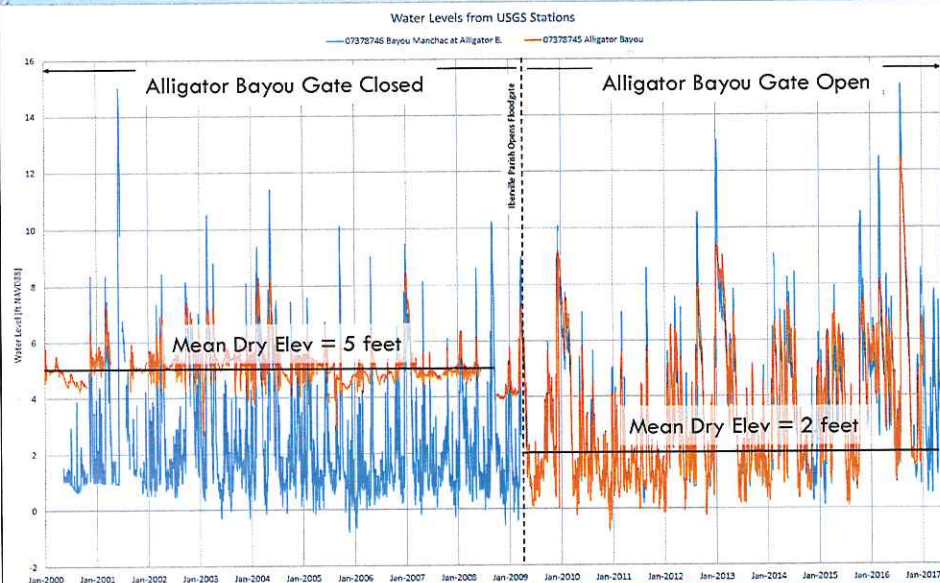


### Bayou Manchac Basin

- Located in the lower west portion of the Amite River Basin
- Primarily drains into the Amite River
- Under high Amite River water events, the Amite River backwater floods into the Bayou Manchac Basin



## USGS Gauges Comparison 2000-2017



## Model Simulations





## Capillary Fringe

### Wetland Delineation Training Manual and Workbook

Richard Chinn Environmental Training, Inc.  
804 Cottage Hill Way, Brandon, FL 33511-8068  
Phone 1-800-427-0507 • Fax 813-354-4858  
<http://www.richardchinn.com> • [info@richardchinn.com](mailto:info@richardchinn.com)

#### Estimates of Capillary Fringe

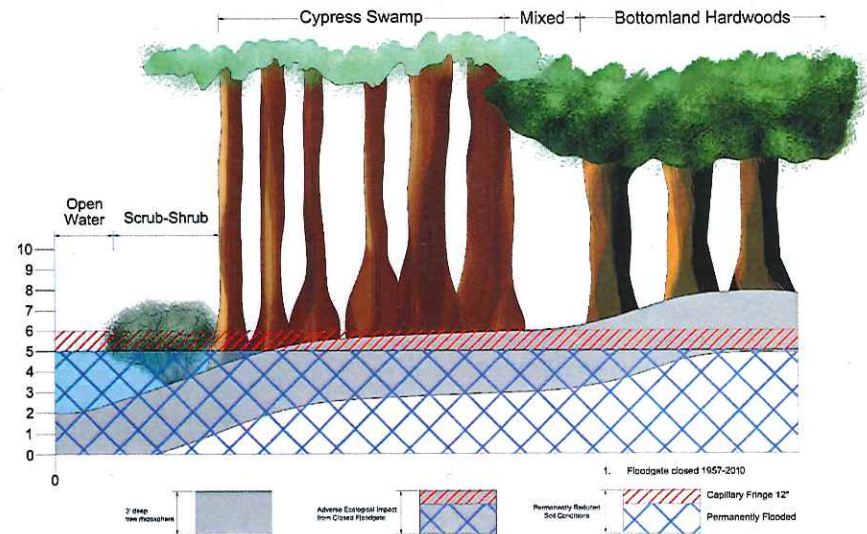
Soil Texture	Capillary Fringe (in.)
Coarse Sand	0.4 - 2.8
Sand	0.4 - 3.5
Fine Sand	1.2 - 3.9
Very Fine Sand	1.6 - 4.7
Loamy Coarse Sand	2.0 - 5.5
Loamy Sand	2.4 - 5.5
Loamy Fine Sand	3.1 - 7.1
Coarse Sandy Loam	3.1 - 7.1
Loamy Very Fine Sand	3.9 - 7.9
Sandy Loam	3.9 - 7.9
Fine Sandy Loam	5.5 - 9.4
Very Fine Sandy Loam	6.3 - 10.2
Loam	7.9 - 11.8
Sandy Clay Loam	7.9 - 11.8
Sandy Clay	7.9 - 11.8
Clay Loam	9.8 - 13.8
Silt Loam	9.8 - 15.7
Clay	9.8 - 15.7
Silt	13.8 - 19.7
Silty Clay Loam	13.8 - 21.7
Silty Clay	15.7 - 23.6

**Conservative estimate = 12" Fringe**

From: Meusbach, M.J. 1992. Soil Survey Interpretations for Wet Soils. P. 172 - 178. In Eighth International Soil Correlations Meeting.

## Basin Cross-Section: Gate Closed

Existing Hydrologic Condition/Regime = Permanently Flooded: 1957 to 2010  
Gate closed at 5' to facilitate recreational use



Alligator Bayou Gate Closed - Impacted Area (Below 6ft)



#### Legend

- Unit I
- Unit II
- Unit III
- Unit VI
- Spanish Lake Sub-basin
- Non Spanish Lake Sub-basin
- Elevations [ft NAVD88]
  - Below 5ft
  - 5ft - 6ft
  - Above 6ft

0 0.375 0.75 1.5 Miles

Alligator Bayou Gate Open - Impacted Area (Below 3ft)



#### Legend

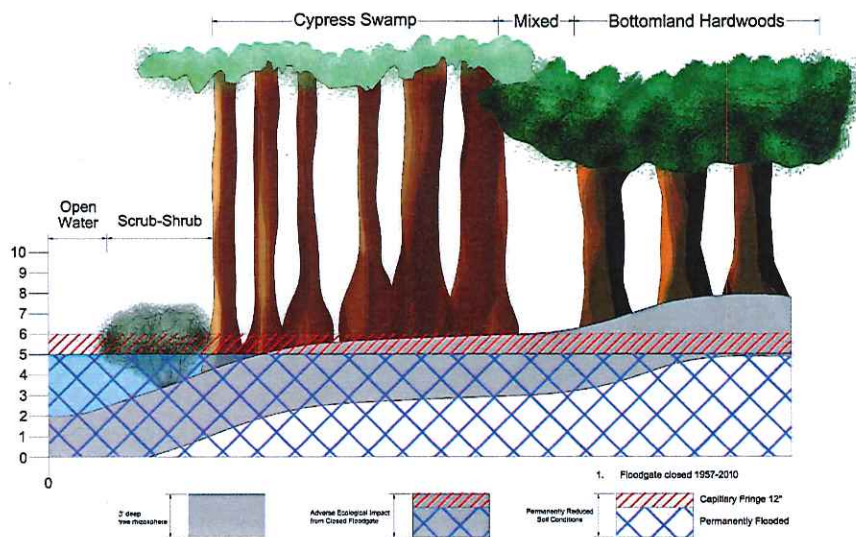
- Unit I
- Unit II
- Unit III
- Unit VI
- Spanish Lake Sub-basin
- Non Spanish Lake Sub-basin
- Elevations [ft NAVD88]
  - Below 2ft
  - 2ft - 3ft
  - Above 3ft

0 0.375 0.75 1.5 Miles



## Rhizosphere Profile: Gate Closed

Existing Hydrologic Condition/Regime = Permanently Flooded: 1957 to 2010  
Gate closed at 5' to facilitate recreational use



## Rhizosphere

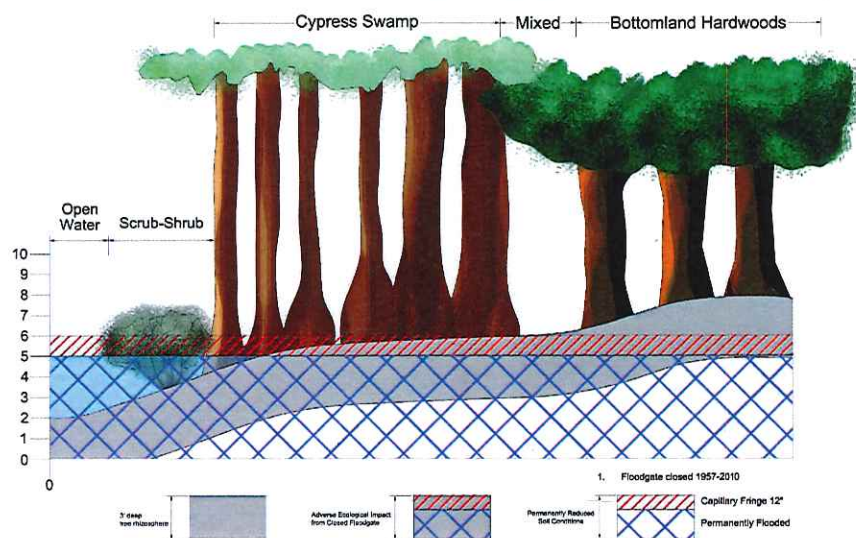
Depth in feet

Depth in meters



## Rhizosphere Profile: Gate Closed

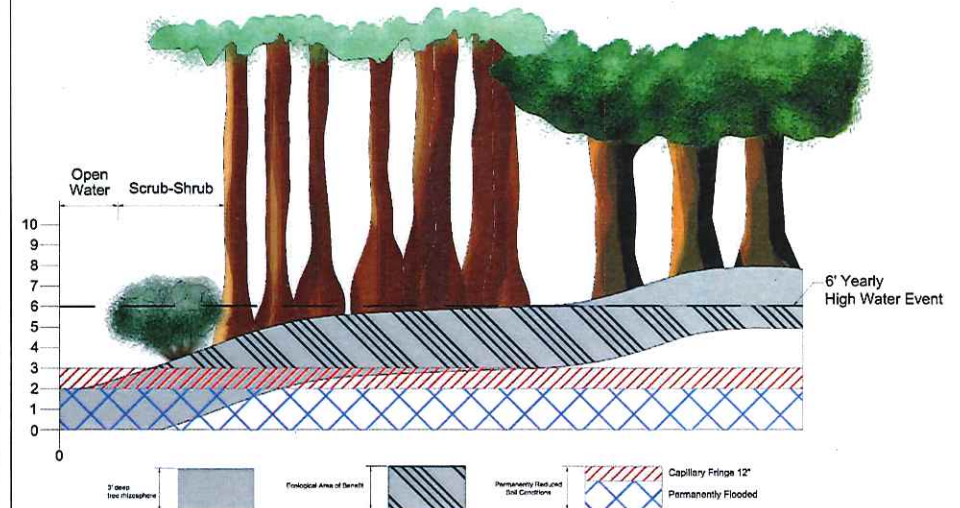
Existing Hydrologic Condition/Regime = Permanently Flooded: 1957 to 2010  
Gate closed at 5' to facilitate recreational use



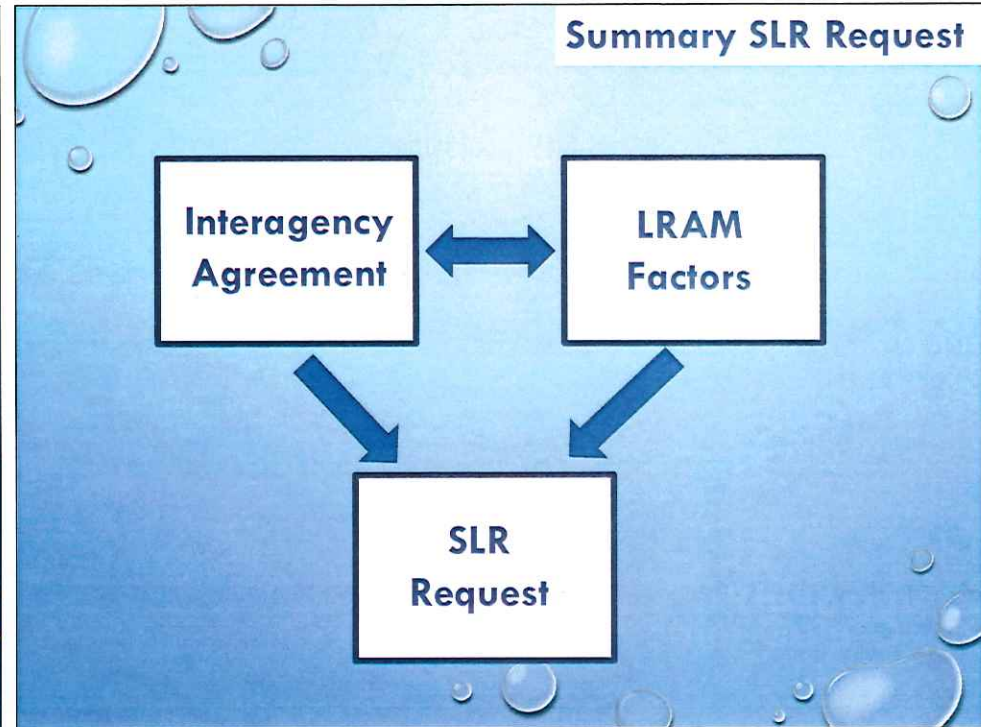
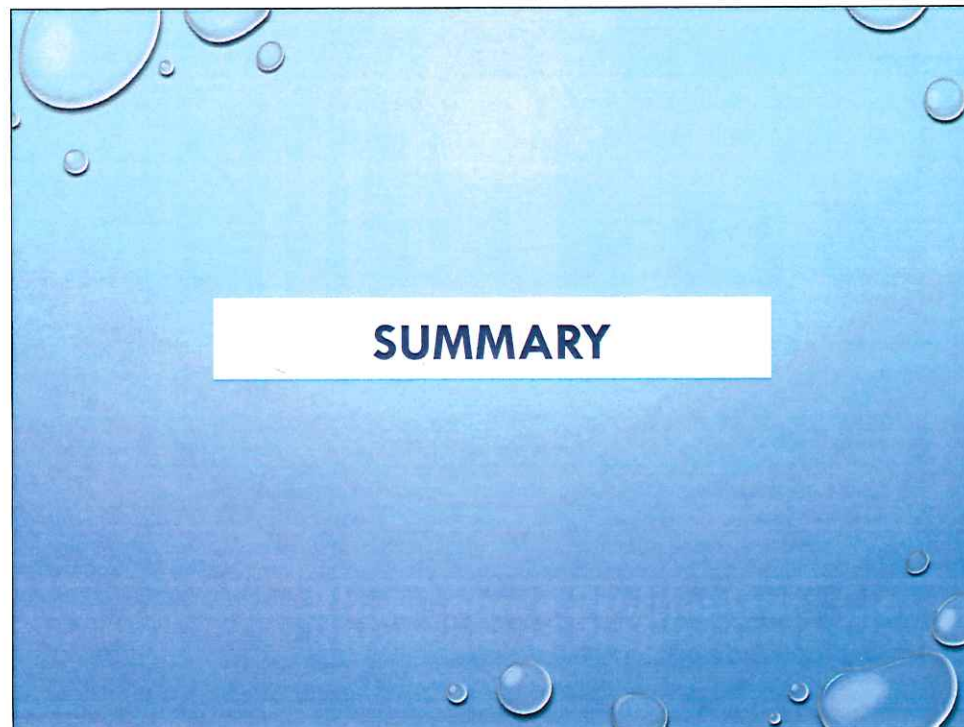
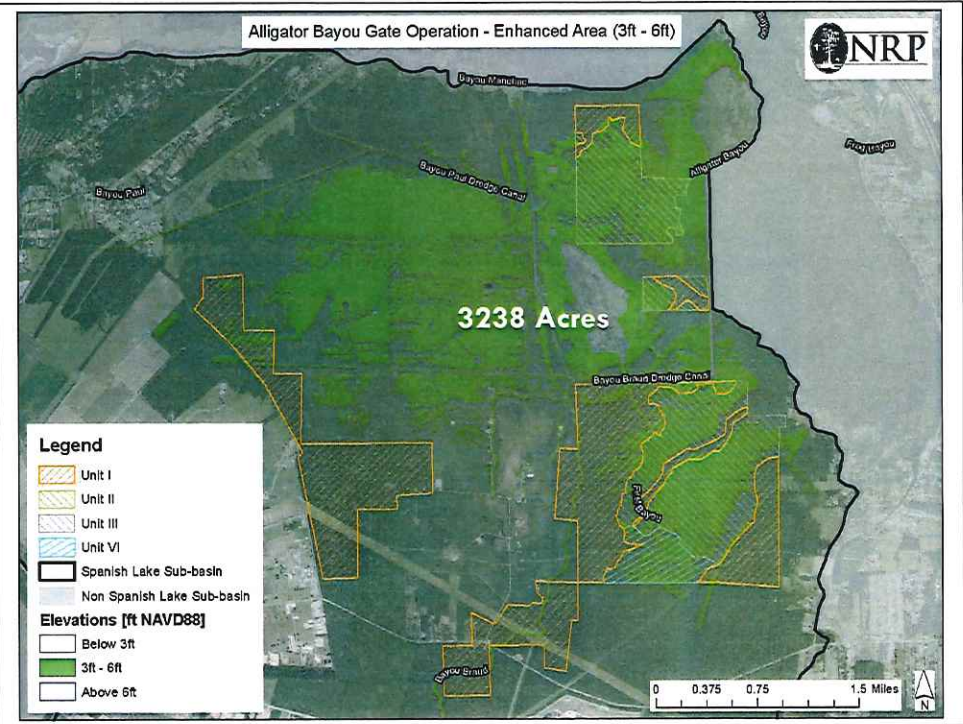
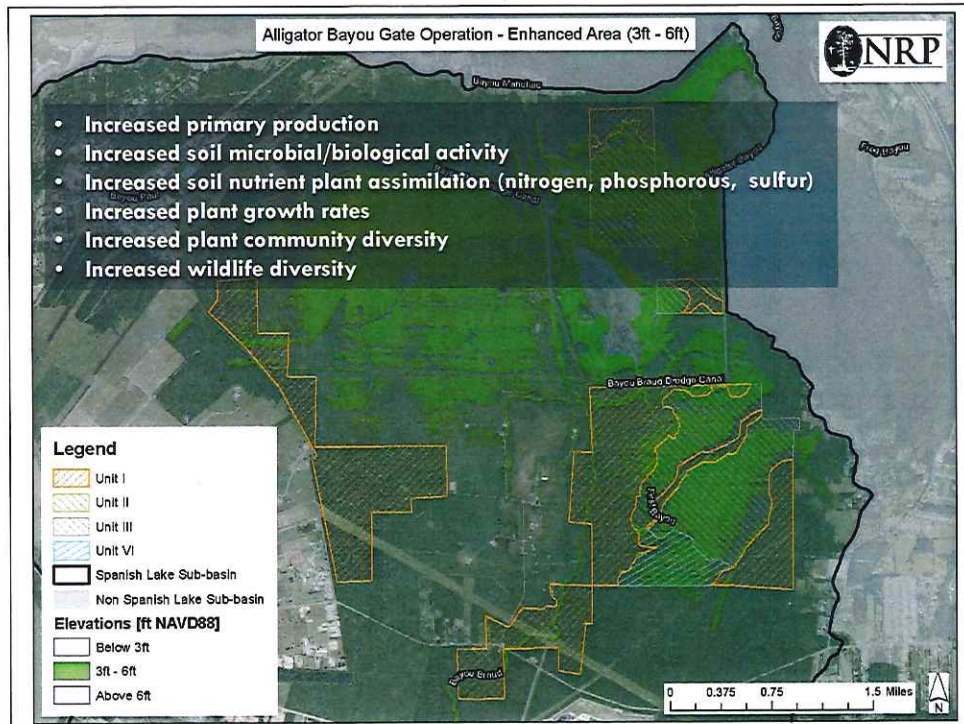
## Rhizosphere Profile: Gate Open

Hydrologic Regime Change = Permanently Flooded OPEN GATE Seasonally Inundated

Cypress Swamp Mixed Bottomland Hardwoods









## Summary SLR Request

### Units I & IIa

Mitigation Type: Change to "Enhancement"

Size: Use "> 500 acres"

### Units III & VI

Management: Change to "None"

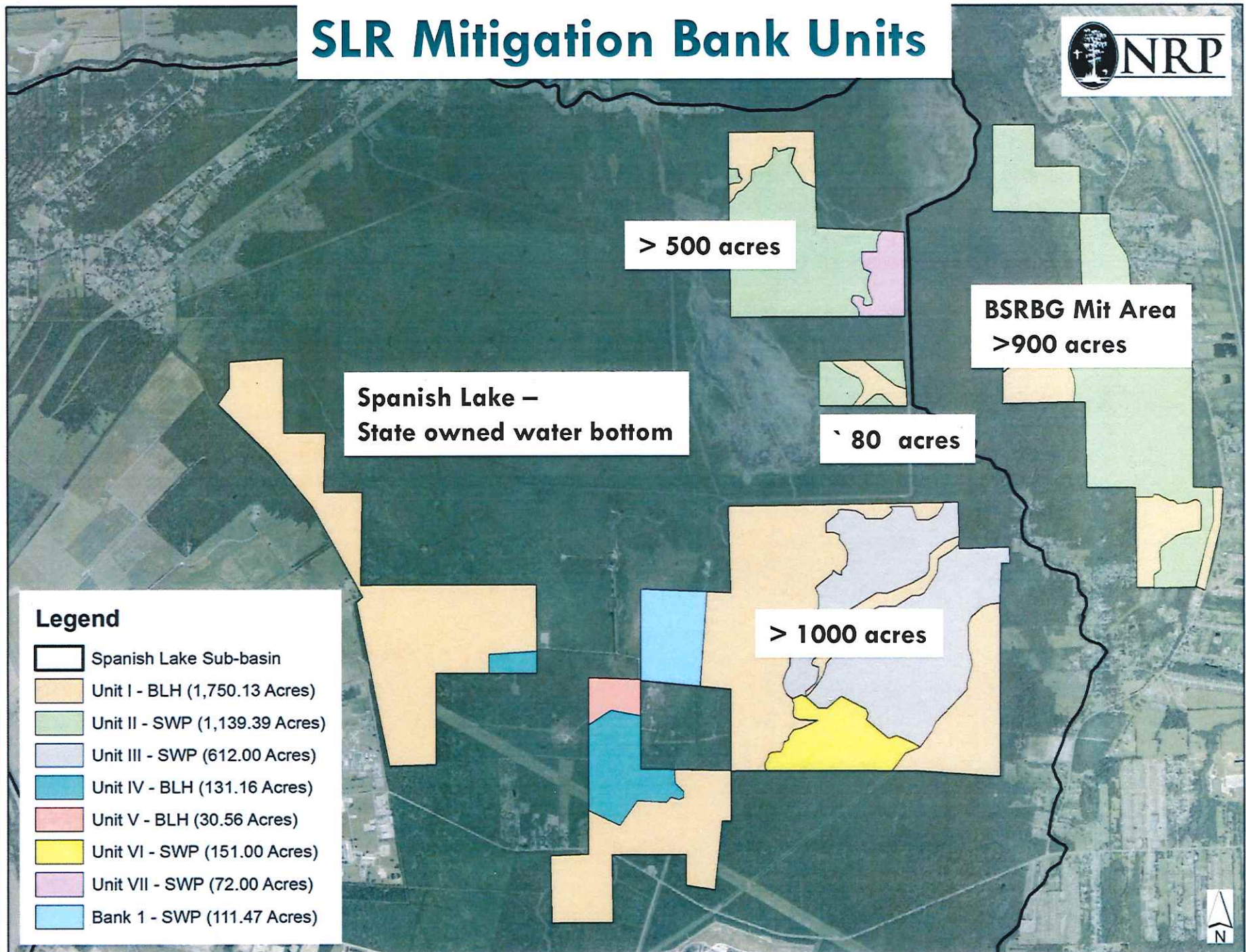
### Units IIb

Defer Final Scoring

**QUESTIONS??**



# SLR Mitigation Bank Units





# Spanish Lake Restoration, LLC

## IRT Presentation Handout



Spanish Lake Restoration, LLC

November 2016 LRAM Request Letter





## Spanish Lake Restoration, LLC

Wetlands Bank and Ecological Resource

7478 Highland Road; Baton Rouge, Louisiana 70808

Phone: 225.928.5333

November 17, 2016

Colonel Michael Clancy  
Commander & District Engineer  
United States Army Corps of Engineers  
New Orleans District  
7400 Leake Ave  
New Orleans, LA 70118

Re: Request for Consideration by Spanish Lake Restoration, LLC Mitigation Bank

Dear Colonel Clancy,

Congratulations upon your recent assignment as the New Orleans District's 63<sup>rd</sup> Commander and District Engineer. We are truly honored to have someone in command with your educational background and such a distinguished and decorated service record. Thank you for your continued service to your country. Spanish Lake Restoration, LLC (SLR) respectfully requests that you please place SLR's Mitigation Bank on your agenda and schedule a meeting within the NOD to discuss matters outlined below.

SLR is a 4,000+ acre Mitigation Bank located in Iberville & Ascension Parishes that was established in 1999 using the Wetland Valuation Assessment (WVA) methodology. More than 300 Individual and Nationwide §404/§10 Permits were issued under the WVA between 1999-2011 and later, the New Orleans District's Civil Works Division in 2014 and 2015 purchased a number of compensatory mitigation credits under the WVA from SLR for a levee and a diversion project.

Beginning in 2011, a series of new Mitigation Bank Assessment techniques began to be implemented that have had the effect of seriously devaluing SLR's credit ratios, starting with the Modified Charleston Method (MCM). In 2014, the New Ratio Method (NRM) was instituted in lieu of the MCM and then most recently in early 2016, the Final Interim Version of the Louisiana Wetland Rapid Assessment Method (LRAM) was put into effect. The NRM and LRAM have carried forward the MCM's decrease in SLR's credit values.



There are three issues pertaining to the revaluation of SLR's Mitigation Bank that we respectfully ask for your consideration: (1) SLR be given "Enhancement" status under the LRAM for "Preservation" acreage (32.24 acres in Unit I & 380.55 acres in Unit II) within the Spanish Lake Basin that was beneficially improved approximately 6 years ago, as permitted in SLR's MBI; (2) SLR Bank Units III & VI be designated under the LRAM "Site Management Factor" as "None", instead of "Passive", where Units I & II are already designated as "None"; and (3) SLR Bank Units I & II be recognized under the LRAM "Size Factor" as ">500 acres", instead of "<500 acres", where Unit I has 1,750 acres under Servitude and Unit II has 1,139 acres under Servitude. We have detailed each of these matters in the attached "*Issues For Consideration*" outline.

We have discussed these issues with U.S. EPA Region VI and we now, by this correspondence, respectfully request your consideration.

We thank you in advance.

Sincerely,

Stephen R. Wallace  
Manager  
Spanish Lake Restoration, LLC

Cc: Mr. William H. Honker, P.E., Director—Water Division, EPA Region VI  
Mr. Mark R. Wingate, Deputy District Engineer, New Orleans District  
Mr. Murray P. Starkel



## Issues For NOD Consideration

### 1. LRAM “Mitigation Type Factor” Option: Preservation To *Enhancement* Status

→ SLR respectfully requests that it be given “*Enhancement*” status under the LRAM “Mitigation Type Factor” Option for remaining “Preservation” acreage (32.24 acres in Unit I & 380.55 acres in Unit II) within the Spanish Lake Basin that has benefitted from hydrological improvements implemented >6 years ago.

SLR’s MBI provides that improvements to the hydrological regime in the Spanish Lake Basin would permit SLR to have its Preservation credits extended into *Enhancement* credits. The MBI says “*This agreement may be amended to extend mitigation credits for additional **enhancement associated with hydrologic improvement** activities to areas **where** the sole basis of mitigation credit is **currently Preservation**.*” (p. 22) The MBI recognizes that off-site activities can either negatively alter or positively inure to the benefit of the Bank’s value: “*Mitigation potential may be adjusted by MBRT at any time should an Act of God or human- induced activity adversely affect the value or function...*” and “*If...programs are used offsite...and the programs’ activities either directly or indirectly benefit the Bank, then the Sponsor will not forfeit credits.*” It’s an outcome-determinative criterion.

Under the LRAM, “*Enhancement*” is *the manipulation or modification of a wetland that heightens, intensifies or improves specific aquatic resource function(s) or is something done to change the growth stage or composition of the vegetation present, even though it may lead to a decline in other function(s).* This is very similar to the definition of “Enhancement” set forth in 33 CFR §332.2: “The manipulation of the physical, chemical or biological characteristics of an aquatic resource to heighten, intensify or improve a specific aquatic resource function.”

Activities undertaken by SLR to restore the natural hydraulic connectivity between Bayou Manchac and the 14,000+ acre Spanish Lake Basin (including its headwaters: Alligator Bayou, Bayou Paul & Bayou Braud) and related matters, included: (i) performing extensive historical, political, biological, topographical and hydrological research/follow-up required to open the off-site Alligator Bayou Flood-Gate, improperly used as a weir since the 1950’s to artificially maintain high water levels throughout the entire Spanish Lake Basin; (ii) spear-heading a lawsuit and obtaining a final Court Order (upheld in 2014 by the La. 1st Circuit Court of Appeal) to stop and prevent the use of the Flood-Gate as a weir; (iii) after the Flood-Gate was opened and at the Corps’ behest, obtaining a Preliminary JD for SLR’s Bank on 1261.44 Bank acres in the Spanish Lake Basin to delineate jurisdictional wetlands (1159.66 acres) and non-wetland/waters of the U.S. (101.78 acres); (iv) identifying and removing 127 acres from SLR’s Bank in the Spanish Lake Basin impacted by mineral activity; (v) transferring all credits sold from the removed acreage to non-impacted portions of SLR’s Bank; and (vi) Signatory to the 2010 Spanish Lake/Alligator Bayou Flood-Gate Drainage Agreement.



Opening the Flood-Gate was equivalent to removing a low dam that had been in place for >50 years. This resulted in significant improvement to aquatic resource functioning not only within SLR's Bank, but also the entire larger Spanish Lake Basin. The hydrologic regime for surface soils with elevations between 1.5-6.0 feet NAVD was restored from a permanently flooded basis to a seasonally inundated regime. More than 50+ detrimental years of continuously extended hydro-periods within the Spanish Lake Basin were eliminated, normal historical water levels were reestablished and vital flood storage capacity was regained. This hydrologic restoration allowed for seasonal inundation/drying within the upper soil profile (reduction/oxidation) facilitating nutrient uptake that resulted in the regeneration of native hardwoods and bald cypress, which had been over-stressed and were not able to propagate in the continuously standing water. Habitat quality has of course, likewise, greatly increased in the process.

SLR has documented the hydrologically-enhancing benefits of this action through the attached 2000-2016 USGS Gage Data for Bayou Manchac (#07378746) and Alligator Bayou (#07378745), which establish that following the lowering of the Flood-Gate, the water levels in Spanish Lake Basin were now in sync with those of Bayou Manchac—i.e., the natural hydrological regime had been restored (*See* Exhibit A). Also shown therein is the resultant overall lowering of water levels within the Basin, as well as significantly decreased durational periods of flooding events. It is worth noting that even when the Gate is temporarily “up” during episodic Amite River backwater flooding events, hydrological flow within the Spanish Lake Basin is not significantly altered because the Basin cannot naturally drain until the water level in Bayou Manchac is lower.

The improved ecological condition of this aquatic resource is perceptually clear and the resultant functional and value output is self-evident. “*New conditions*”, including the much improved hydrology, are established and present within the Spanish Lake Basin and warrant an upgrade of the remaining unsold Preservation acreage within SLR's Bank to *Enhancement* status.

## 2. LRAM “Project Site Management Factor” Option: Passive to None

→ SLR respectfully requests that the LRAM “Project Site Management Factor” Option be changed from “Passive” to “None” in SLR Units III & IV, where SLR Units I & II are already properly designated as having “None” and use of the Flood-Gate did not create these wetlands nor does it maintain or sustain them.

Under LRAM, Project Site Management “refers to the level of maintenance or management that is required to maintain wetland hydrology on the project site.” “*Passive*” Site Management is defined as “...structures that are required...to maintain hydrology from off-site.” “*None*” (Project Site Management) means that “the site functions without dependence on structural management.”



None of the subject wetlands “*require*” the passive use of the Flood-Gate as a control structure to artificially maintain some set water level in order for the Bank’s wetlands to properly function or be sustained in any manner. SLR’s wetland hydrology is not dependent upon the Gate’s absence or presence nor is it “*maintained*” by “*management*” of the Flood-Gate. The Spanish Lake Basin wetland hydrology now functions in relative accord with the natural hydrologic regime of the Amite River/Bayou Manchac Watershed. Indeed, SLR’s wetlands were in existence long before the Flood-Gate was improperly used as a weir, although these wetlands were impaired during that 50+ year period by the artificially elevated water levels that were then-maintained above the natural hydrological regime.

Additionally, SLR Bank Units I, II (in part), III & IV are in the Spanish Lake Basin behind the Flood-Gate. It’s *inconsistent* to categorize Units III & VI as having “*Passive*” Project Site Management (which comes with a negative “*-1 M-Value*”), although Unit I and the pertinent portion of Unit II are both properly designated as having “*No[ne]*” Site Management (which comes with a neutral “*0 M-Value*”).

Similarly, another reason supporting SLR’s request that the “*Passive*” Project Site Management Factor *not* be ascribed to any of SLR’s Units is the fact that an upstream, adjacent Bank (Bayou Manchac-Oakley) was designated as having “*No[ne]*” Site Management for the LRAM Project Site Management Factor. The Bayou Manchac-Oakley site is hydrologically connected to SLR within the Spanish Lake Basin and, likewise, is located behind the Flood-Gate.

### 3. LRAM “Size Factor” Option: >500 acres

→ SLR respectfully requests that the LRAM “Size Factor” Option in SLR Units I & II be changed from “<500 Acres” (which comes with a 0.0 M-Value) to “>500 Acres” (*which comes with a 0.5 M-Value*), where SLR’s Unit I has 1,750 Acres under servitude and Unit II has 1,139 Acres under servitude.

LRAM defines the “*Size Factor*” as follows: “The measure of the *total size* of the mitigation project that will be placed under protection of a conservation servitude.” Total size is the key factor because “larger tracts are less common, have a greater potential for habitat diversity, provide a greater degree of isolation and thereby offer higher quality habitat than smaller tracts.”

The “total size” of SLR’s Mitigation Bank is 4,000+ acres of protected wetlands under a conservation servitude, which consists of several >500+ acre contiguous tracts. All of SLR’s wetlands remain isolated within the greater 24,000+ combined acre Manchac/Spanish Lake Basin. SLR’s MBI is replete with references to this 4000+ acre Bank as having a “high value as wetland and wildlife habitat” precisely because of the large amount of isolated acreage under servitude. SLR is not being given the proper “*larger tract*” value its wetland acreage is due.



**SLR's Remaining Available Mitigation Acreage (Units I, II, III & VI):**

**Unit I:** 1,750 acres under servitude and currently has **32.24** acres remaining, within the Spanish Lake Basin (Alligator Bayou drainage area).

LRAM Factor	Option	NOD's M-Value	SLR's M-Value
Mitigation Type	Preservation <b>Enhancement</b>	0.4	<b>3</b>
Management	None	0	0
Negative Influences	Low	0	0
Size	500 : 100 acres <b>&gt;500 acres</b>	0	<b>0.5</b>
Buffer/Upland	None	0	0
Sum	-	<b>0.4</b>	<b>3.5</b>
LRAM Credits:		<b>12.90</b>	<b>112.84</b>

**Unit II:** 1,139 acres under servitude and currently has **1087.89** acres available, of which (a) **380.55** acres are within the Spanish Lake Basin and (b) **707.34** are within the Bluff Swamp Basin (Frog Bayou Drainage area). Therefore, SLR proposes separate LRAM Values for each "Sub-Unit."

→ **Sub-Unit (a)---Within Spanish Lake Basin (380.55-ACRES)**

LRAM Factor	Option	NOD's M-Value	SLR's M-Value
Mitigation Type	Preservation <b>Enhancement</b>	0.4	<b>3</b>
Management	None	0	0
Negative Influences	Low	0	0
Size	500 : 100 acres <b>&gt;500 acres</b>	0	<b>0.5</b>
Buffer/Upland	None	0	
Sum	-	<b>0.4</b>	<b>3.5</b>
LRAM Credits:		<b>152.22</b>	<b>1,331.93</b>



→ **Sub-Unit (b)---Within *Bluff Swamp* Basin (707.34 ACRES)**

Factor	Option	NOD's M-Value	SLR's M-Value
Mitigation Type	Preservation	0.4	0.4
Management	None	0	0
Negative Influences	Low	0	0
Size	500 : 100 acres >500 acres	0	0.5
Buffer/Upland	None	0	
<b>Sum</b>	-	<b>0.4</b>	<b>0.9</b>
<b>LRAM Credits:</b>		<b>282.94</b>	<b>636.61</b>

→ This portion of Unit II will likely experience a similar hydrologic improvement in the near future. SLR requests Enhancement Value is likewise given to that acreage when it occurs.

**Unit III:** 612 acres under servitude and currently has **149.45** acres available, within the Spanish Lake Basin.

Factor	Option	NOD's M-Value	SLR's M-Value
Mitigation Type	Enhancement	3	3
Management	Passive <b>None</b>	-1	<b>0</b>
Negative Influences	Low	0	0
Size	>500 acres	.5	.5
Buffer/Upland	None	0	0
<b>Sum</b>	-	<b>2.5</b>	<b>3.5</b>
<b>LRAM Credits:</b>		<b>373.63</b>	<b>523.1</b>

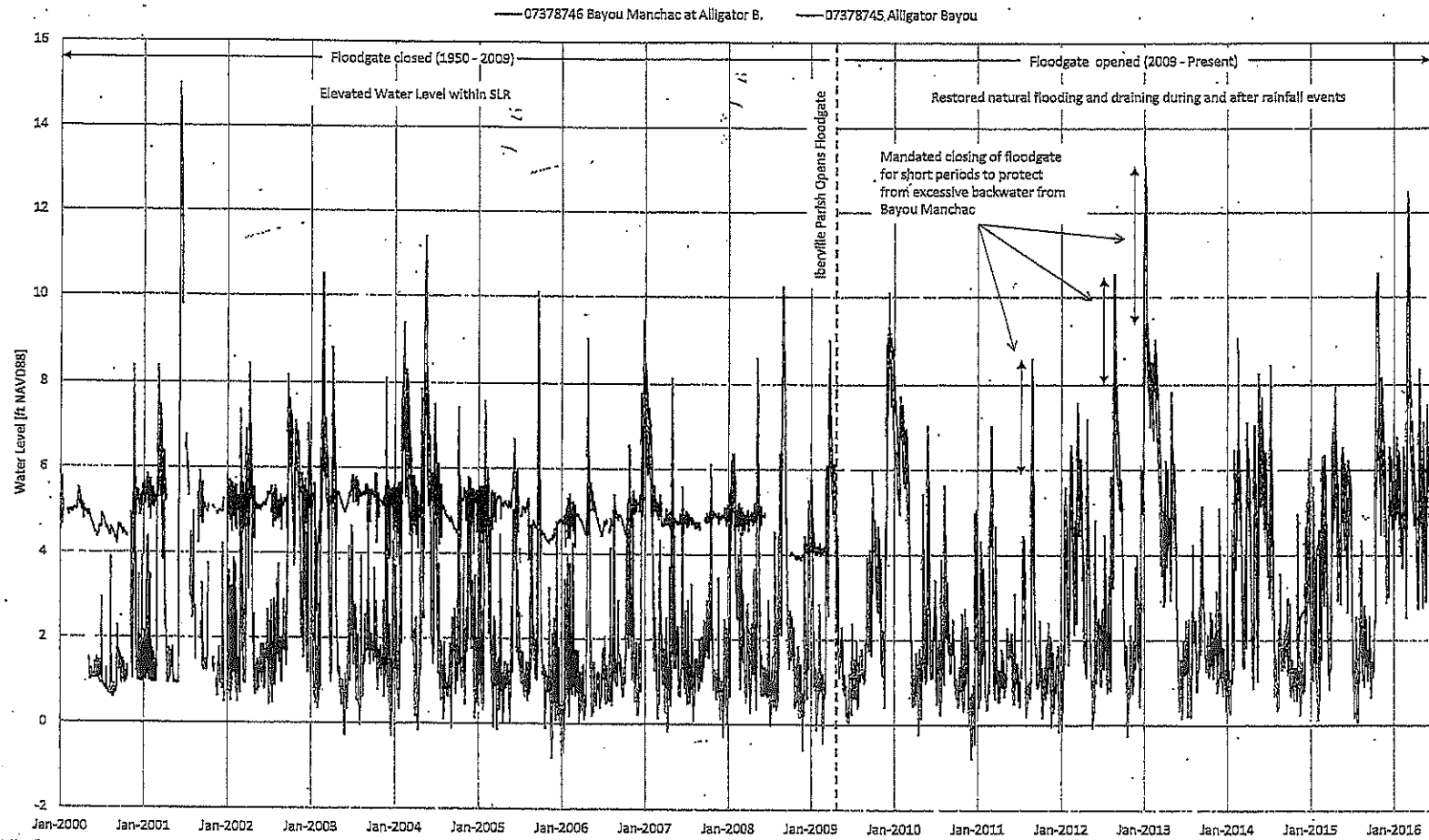


**Unit VI:** Contiguous with and in-between 612 acres of Unit III and approximately 670 acres of Unit I, Unit VI currently has **150.4** acres available, within the Spanish Lake Basin.

Factor	Option	NOD's M-Value	SLR's M-Value
Mitigation Type	Enhancement	3	3
Management	Passive	-1	
	None		0
Negative Influences	Low	0	0
Size	>500 acres	.5	.5
Buffer/Upland	None	0	0
Sum	-	2.5	3.5
LRAM Credits:		376	526.4

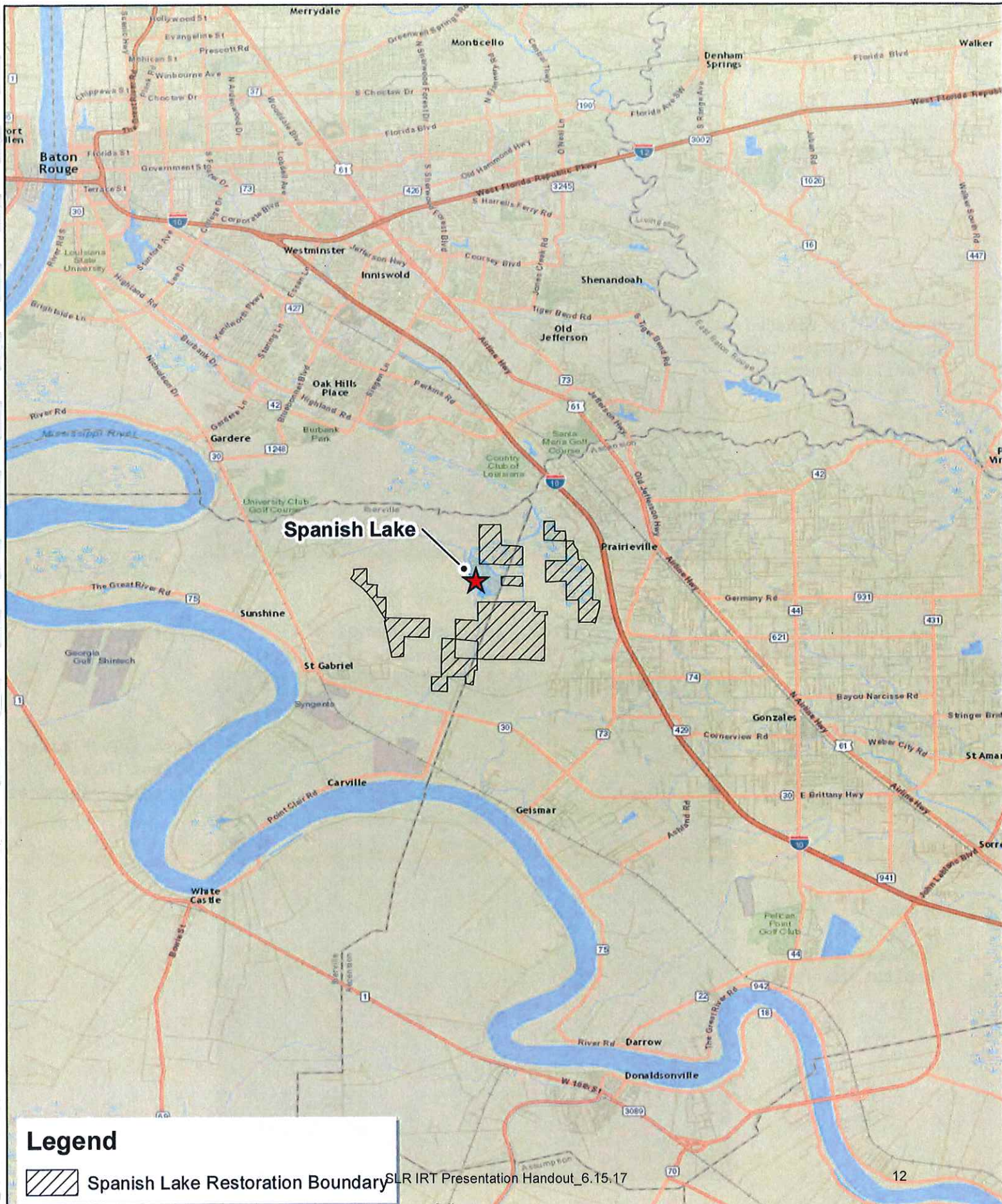


# Water Levels from USGS Stations





# Spanish Lake and Spanish Lake Restoration Vicinity Map



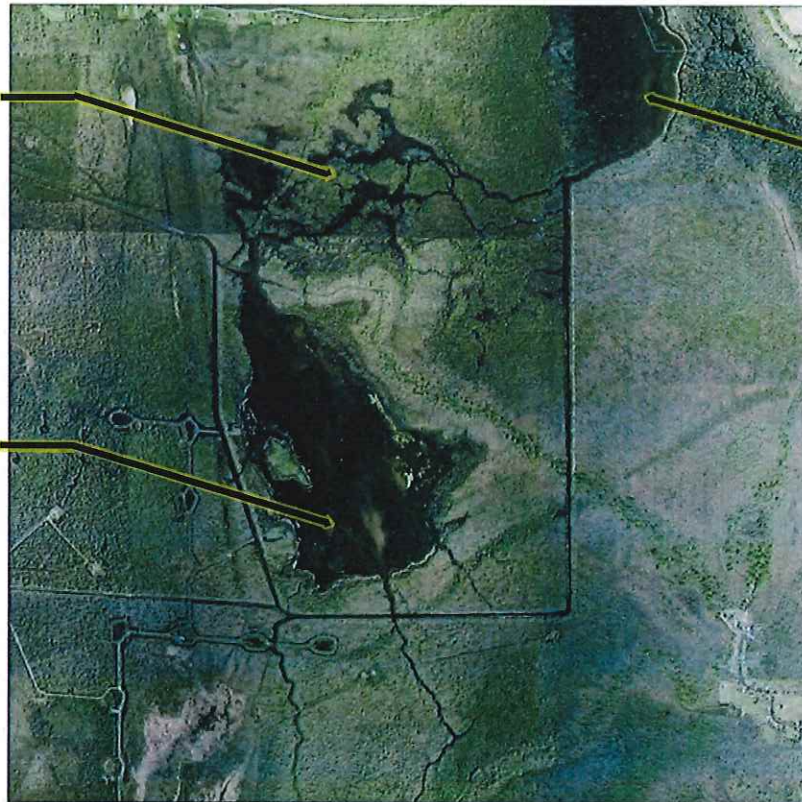


# Effects of the Alligator Bayou Floodgate Opening on Spanish Lake

Before Floodgate Opened  
1950 - 2010 Permanently Flooded

Permanently Flooded  
old growth cypress swamp  
(no regeneration)

Permanently Flooded  
shallow Spanish Lake  
hydrilla dominance

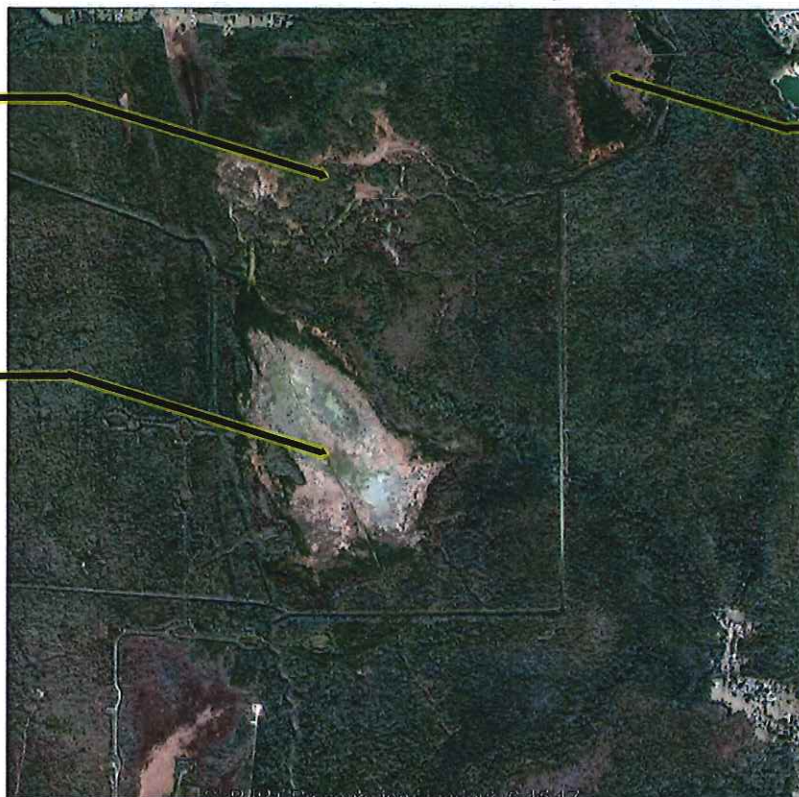


Permanently Flooded  
Cypress Flats  
(no regeneration)

After Floodgate Opened  
November 2011 - Seasonally Inundated

Seasonally Flooded  
cypress swamp  
facilitating  
seedling growth

Seasonally Flooded  
Spanish Lake  
increased plant/  
habitat diversity



Seasonally Flooded  
Cypress Flats  
currently regenerating



# Effects of the Alligator Bayou Floodgate Opening on Spanish Lake

After Floodgate Opened  
August 2015 Seasonally Inundated (Summer - Dry Period)

Seasonally Flooded  
cypress swamp  
facilitating  
seedling growth

Seasonally Flooded  
Spanish Lake  
increased plant/  
habitat diversity

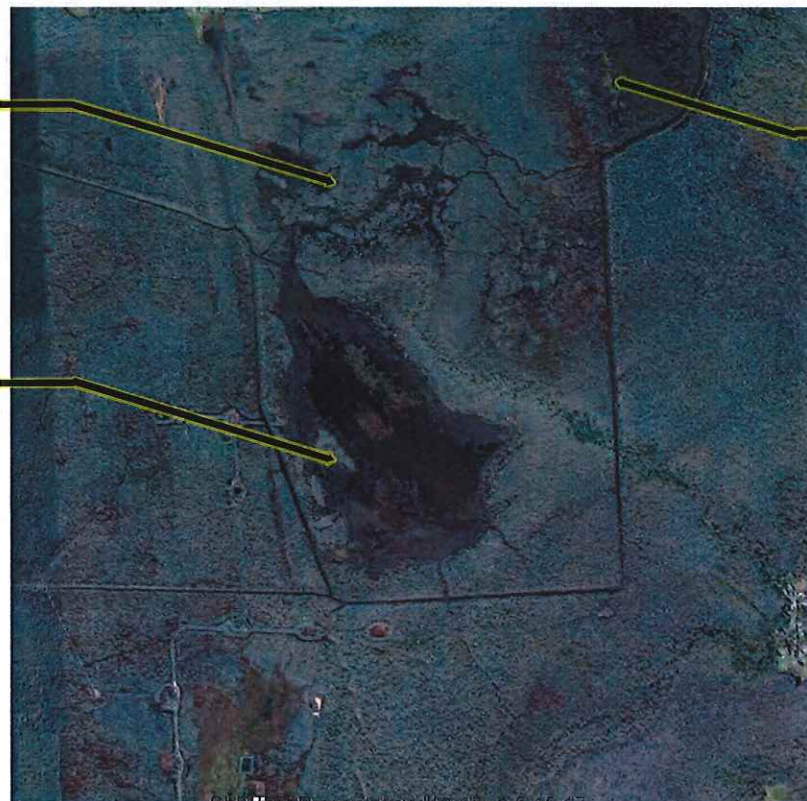


Seasonally Flooded  
Cypress Flats  
currently regenerati

After Floodgate Opened  
January 2016 - Seasonally Inundated (Winter - Wet Period)

Seasonally Flooded  
cypress swamp  
facilitating  
seedling growth

Seasonally Flooded  
Spanish Lake  
increased plant/  
habitat diversity



Seasonally Flooded  
Cypress Flats  
currently regeneratin



# Effects of the Alligator Bayou Floodgate Opening on Spanish Lake





# Louisiana Rapid Assessment Method Guidebook

## Mitigation Factors



## *LRAM Mitigation Factors*

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There are five factors which are utilized in LRAM to assess the “Mitigation Site(s):” Mitigation Type, Management, Negative Influences, Size and Buffer/Upland. The below table is a list of each “Mitigation Site” factor, the options for each factor, and the associated m-values assigned to each option:

Factor	Option	m value
Mitigation Type	Re-Establishment	6
	Rehabilitation	5
	Enhancement	3
	Preservation	0.4
Management	None	0
	Passive	-1
	Active	-2
Negative Influences	Low	0
	Medium	-0.5
	High	-1
Size	> 500 acres	0.5
	500 : 100 acres	0
	< 100 acres	-0.5
Buffer/Upland	None	0
	Buffer/Upland Inclusions	0.2
	Restored Buffer/Uplands	0.5

The mitigation potential (M) per acre is calculated by summing all of the m factors listed above ( $\Sigma m = M$ ). The M is then multiplied by the acreage of a compensatory mitigation project to determine the total number of LRAM credits generated. Detailed discussion of each “Mitigation Site” factor and their options are discussed below in Sections III.A through III.J.

### **A. Mitigation Type**

The mitigation type factor is identified based on the wetland project type definitions found in 33 CFR 332.2 and 40 CFR Part 230.92. The mitigation type evaluates the net level of functional change to a site associated with the ecological lift provided by the mitigation work plan. The user should note that the amount of work required in a mitigation work plan may not correspond to the amount of credit generated.



**Re-establishment (Re-Est).** The proposed site is a former wetland having lost the necessary hydrologic component to support hydrophytic vegetation. Potential sites include agricultural areas or maintained pasture areas. The mitigation plan includes the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland.

OR: Site is predominantly open water. Sponsor to deposit dredged material to an elevation conducive to tidal marsh re-establishment, plant dredged material and restore/create small tidal channels for fisheries access.

**Rehabilitation (Rehab).** The proposed site is a degraded wetland on which most aquatic resource functions have been severely impacted such that it does not exhibit the general characteristics of the target-type ecosystem. Site is farmed wetlands, wet pasture, crawfish pond constructed in former wet areas that have been out of agricultural production for less than five years, and areas with greater than 50% absolute cover of Chinese tallow tree.

**Enhancement (Enhance).** Proposed site is a wetland that requires modification to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present.

**Preservation (Preser).** Site is a functioning wetland and integral to the functionality of adjacent wetlands or aquatic resources. The project site must be encumbered by a site protection instrument as defined in 33 CFR Part 332. Credit granted should accompany credit generated by re-establishment, rehabilitation or enhancement and will generally be limited to 50% of the total acreage of restoration/enhancement acres for the rest of the project site. Compensatory mitigation projects whose credits are derived solely from preservation will still be considered on a case-by-case basis.

For a project to qualify for preservation credits, it must meet the criteria of 33 CFR Part 332.3, more specifically:

1. The resources to be preserved provide important physical, chemical, or biological functions for the watershed;
2. The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available;
3. Preservation is determined by the district engineer to be appropriate and practicable;
4. The resources are under threat of destruction or adverse modifications; and
5. The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust). When selecting Preservation as a mitigation type, no other options (Management, Negative Influences, Size, Buffer/Upland) should be selected in the Workbook. By



definition, preservation projects do not decrease or increase wetland area or wetland functions. If a site is allowed to be used for preservation, it is assumed that site provides an acceptable level of wetland functions and services.

## **B. Project Site Management**

The project site management factor refers to the level of maintenance or management that is required to maintain wetland hydrology on the project site.

**None:** Project site functions in a self-sustaining manner without dependence on long-term structural management. Example: internal and external ditches rendered ineffective at onset of project; culverts exist on-site only to improve sheetflow within the project site; short term structural management with definitive time frames defined in an MBI or permittee responsible mitigation plan.

**Passive Management:** Open culverts, breaches or other passive management structures that are required for habitat restoration and require monitoring and irregular repair or replacement to maintain hydrology from off-site.

**Active Management:** Tidal exchange or overflow from adjacent waterbody under active management. Gated structures or variable crest weirs that function to regulate water levels and/or salinities working in conjunction with dikes or natural landscape features to effectively manage surface hydrology, i.e., greentree reservoirs, marsh management projects, areas within existing leveed areas.

## **C. Negative Influences**

This factor refers to anthropogenic influences, which may occur either internally, adjacent to or within the surrounding landscape of the assessed wetland, that have a deleterious effect on wetland functions and condition of a project site. Such negative influences reduce the ability of a restored/enhanced wetland to attain maximum effectiveness in providing wetland functions and services such as wildlife habitat and water quality enhancements. Typical negative influences that are encountered within CEMVN include elevated roads, levees, canals, maintained corridors and commercial, residential or industrial development.

Elevated roads, levees, canals and maintained corridors fragment on-site habitat or create fragments from adjacent habitats (rights-of-way that exist along boundaries). Besides habitat fragmentation, local and regional hydrology can be seriously impacted by high road beds, minimal surface connectivity due to low presence of culverts or poor structural maintenance of existing culverts. Commercial, residential or industrial development can have similar impacts from adjacent and surrounding properties. To assess negative influences in LRAM, the user will consider each negative influence's affect to regional and local physical structure of the habitat type and regional and local hydrologic effects. This focus is backed by studies (Findlay,Houlahan, 1997) which have shown a direct relationship between species richness of taxa with the existence of roads and forest canopy loss (fragmentation).

**Low:** The project site receives no more than minimal static negative effects from both structural and hydrologic alterations due to anthropogenic influences.



Typical examples include: No 4-lane or greater highways are directly adjacent to the site. Lightly traveled two lane public road may be situated directly adjacent to no more than one side of the site but does not bisect the site. Access roads that exist on-site are at-grade and do not impede surface hydrology. If a transmission right-of-way traverses the project site, the right-of-way must not be greater than 75' in width or the habitat must be emergent. Commercial, residential or industrial development may exist within one mile radius of the project site boundary and does not occupy more than 12% of the project site boundary. No more than 12% of the project site boundary may be bound by a levee.

**Medium:** The project site receives more than minimal static negative effects from either structural or hydrologic alterations due to anthropogenic influences.

Typical examples include: A 4-lane highway directly adjacent to only one side of the site, or; a single lightly traveled public road or right-of-way greater than 75' in width bisects the site. Access roads that exist on-site are above grade but contain culverts or gaps sufficient to provide near natural levels of surface hydrology. Commercial, residential or industrial development may exist within one mile radius of the project site boundary and does not occupy more than 25% of the project site boundary. No more than 50% of the project site boundary may be bound by a levee.

**High:** The project site receives more than minimal negative effects from both structural and hydrologic alterations due to anthropogenic influences.

Typical examples include: Multiple lightly traveled public roads or transmission corridors wider than 75' bisect the project site into more than 2 fragments. Commercial, residential or industrial development may exist within one mile radius of the project site boundary and occupies more than 25% of the project site boundary. More than 50% of the project site boundary is bound by a levee.

#### **D. Size**

The size factor is measure of the total size of the mitigation project that will be placed under protection of a conservation servitude. The assumption of this factor is that larger tracts are less common, have a greater potential for habitat diversity, provide a greater degree of isolation and thereby offer higher quality habitat than smaller tracts. As stated in Roy et al (2010), although edge habitat produces habitat diversity and are used by many wildlife species, it is important to understand four concepts: 1) wildlife species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) edge habitat is quite available due to continual forest fragmentation from residential and/or commercial development and ongoing timber harvesting, 3) most wildlife species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts for maintaining populations.

**> 500** – Greater than 500 acres that are contiguous and protected by legal instrument.

**500 : 100** – Between 500 and 100 acres that are contiguous and protected by a legal instrument.

**Less than 100** - Less than 100 acres that are contiguous and protected by a legal instrument.

#### **E. Buffer and Upland Inclusions**

The buffer and upland inclusion factor captures the extent of buffers and upland inclusions provided by the mitigation plan. Buffers provide a reduction on the negative effects of stressors



and disturbance on the mitigation project site. Anthropogenic disturbances that occur in uplands adjacent to wetland areas can impact the biological, chemical, and physical processes in a wetland (Castelle et al. 1994). Plant species richness and sedimentation have been shown to be influenced by buffers surrounding wetlands (Houlahan et al. 2006 and Skagen et al. 2008, respectively). Wetland buffers reduce adverse impacts to wetland functions from adjacent development by moderating stormwater runoff, stabilizing soil to prevent erosion, providing habitat for wetland-associated species, reducing direct human impact/access to a wetland, and by filtering suspended solids, nutrients, and toxic substances (Castelle et al. 1992). The buffer width necessary for the protection of wetland condition varies widely depending on the wetland processes requiring protection, intensity of adjacent land use, buffer characteristics, and specific buffer functions required (Castelle et al. 1994). Castelle et al. (1994) and Houlahan et al. (2006) stated that buffer width requirements vary from 100 to 820 feet to provide maximum effectiveness.

The presence of uplands provides an increase in habitat diversity, creates wetland/nonwetland interface and can also buffer effects from external stressors.

**Buffers/Upland Inclusion:** A minimum buffer of 200 foot corridor along all or the portion of the perimeter of the site which is integral to functionality of adjacent wetlands or aquatic resources and provides a barrier between the site and adjacent properties. OR:  
All of the uplands contained within the project site boundary are included under the site protection instrument.

**Buffers/Upland Restoration:** The project includes habitat restoration of a minimum buffer of a 200 foot corridor along all or a portion of the perimeter of the site which is integral to functionality of adjacent wetlands or aquatic resources and provides a barrier between the site and adjacent properties. OR:

Habitat restoration occurs on all of the uplands contained within the project site boundary and are included under the site protection instrument.

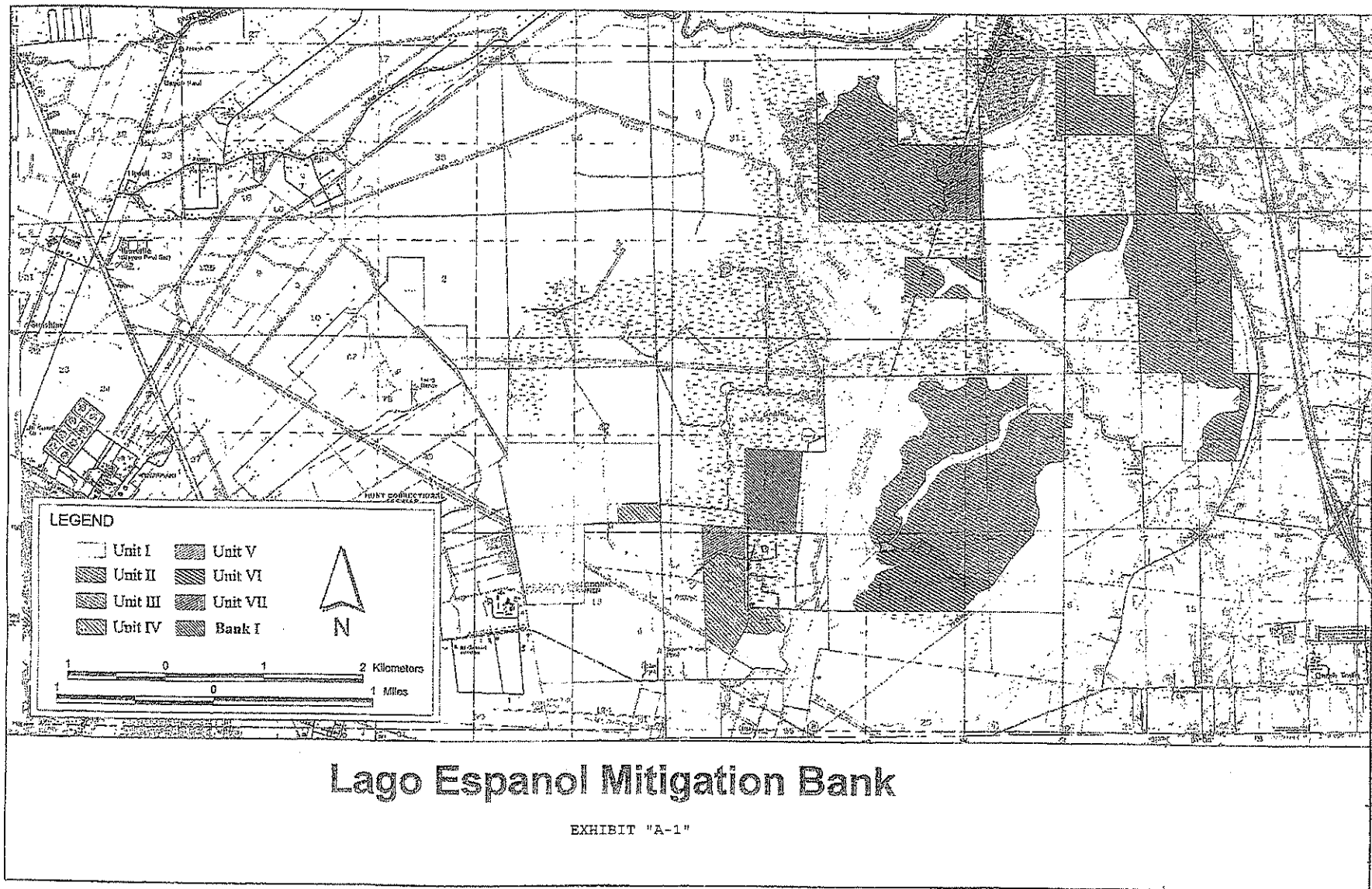
Individual credit acres will not be gained from buffers and upland inclusions. Credits obtained from buffers and upland inclusion will add value to other re-establishment, rehabilitation or enhancement acres.



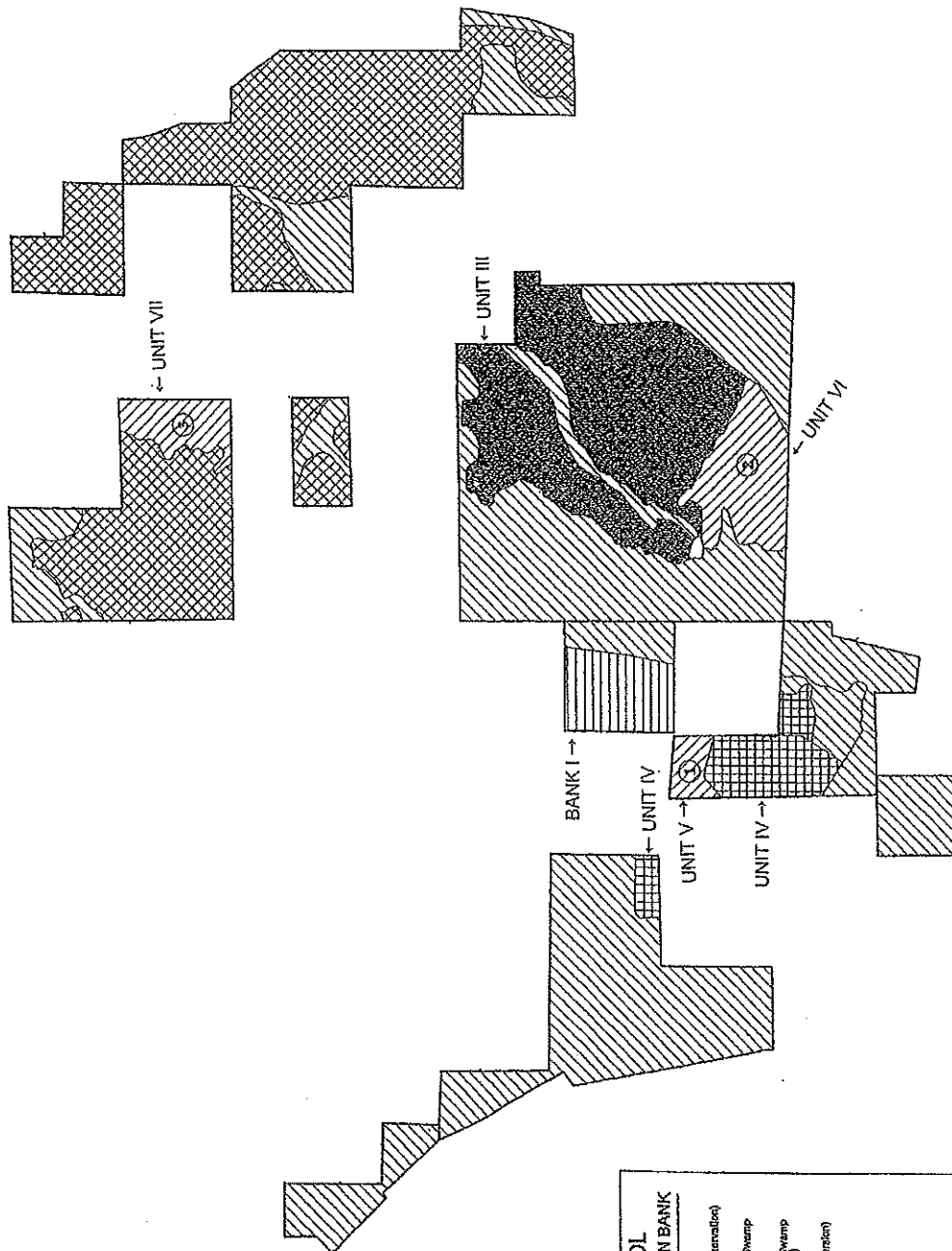
# Spanish Lake Restoration, LLC

## Interagency Agreement









LAGO ESPANOL WETLANDS MITIGATION BANK	
Legend	
	Reforested Hardwood (preservation) 11,817.15 acres
	Redupressa/Tupelo Gum Swamp (preservation/development) 11,383.38 acres
	Redupressa/Tupelo Gum Swamp (preservation/development) 412 acres
	Black Willow Swamp (conversion) 25,536 acres
	Reforested Hardwood XII 131.18 acres
	Push Marsh Salt Kill 111.41 acres

EXHIBIT A-2



**INTERAGENCY AGREEMENT**  
**Lago Espanol, L.L.C.**  
**Lago Espanol Wetland Mitigation Bank**

**I. INTRODUCTION**

Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 authorize the Secretary of the Army, acting through the Chief of Engineers, to issue permits for the discharge of dredged or fill material into Waters of the United States and for construction and other work in or affecting Navigable Waters. Decisions to issue or deny permits are based on a public interest review and, for projects subject to the regulation under the Clean Water Act, on compliance with the 404(b)(1) Guidelines developed by the U.S. Environmental Protection Agency.

Corps permit regulations specify that Department of the Army (DA) permits may be conditioned to require mitigation for impacts which are likely to occur and which are of importance to the human or aquatic environment. The Council on Environmental Quality (CEQ) has defined mitigation to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. Consistent with CEQ's definitions, Subpart H of the Clean Water Act 404(b)(1) Guidelines discusses measures which may be used to avoid and minimize impacts to the aquatic ecosystem and to compensate for unavoidable losses of habitat.

Guidance on the type and level of mitigation required by the 404(b)(1) Guidelines is provided in a Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army dated February 6, 1990. The Memorandum states that "Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required." It further stipulates that, "...for wetlands, the Corps will strive to achieve a goal of no overall net loss of values and functions."

Compensatory mitigation for wetland impacts is accomplished by restoring, enhancing, creating, and in exceptional circumstances, preserving wetlands similar in nature to those being impacted. Mitigation may be performed on an individual, case-by-case basis in which a permit recipient develops and individually implements a mitigation plan specifically designed to offset impacts associated with his or her project. Alternatively, mitigation for multiple actions may be consolidated into a single wetland mitigation project. Consolidating mitigation usually results in greater overall environmental benefits than implementing numerous scattered, typically small, individual mitigation projects and is usually more cost-effective to set up.



On November 28, 1995, the Department of the Army, Environmental Protection Agency, Department of the Interior, Department of Commerce and Department of Agriculture issued joint federal guidance on implementation and operation of mitigation banks. The guidance requires that each mitigation bank has an enabling instrument which documents concurrence between all involved parties on the objectives of the bank and the manner in which the mitigation bank is implemented, operated and administered.

## II. SCOPE OF THIS AGREEMENT

This agreement will serve as the enabling instrument authorizing Lago Espanol, L.L.C., hereinafter referred to as "Sponsor", to establish the Lago Espanol Wetland Mitigation Bank in all lands owned by Sponsor in portions of Sections 32, 33, and 34, Township 8 South, Range 2 East, and Sections 3, 4, 5, 8, 9, 10, 16, 17, 18, and 19, Township 9 South, Range 2 East, Ascension Parish and portions of Sections 2, 11, 12, and 13, Township 9 South, Range 1 East, Sections 5, 7, 8, 17, 18, and 19, Township 9 South, Range 2 East, and Section 32, Township 8 South, Range 2 E, Iberville Parish, located near the communities of Dutchtown and St. Gabriel, Louisiana. The location of the mitigation area is depicted on the attached vicinity map included as Attachment A.

The Lago Espanol Wetland Mitigation Bank as herein defined will operate within the constraints of the National Environmental Policy Act (42 USC 4321 et seq.), the Clean Water Act (33 USC 1251 et seq.), including the Section 404(b)(1) Guidelines (40 CFR 230), Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Corps of Engineers regulations (33 CFR 320-330), and all other applicable federal and state laws, and rules and regulations. The program complies with the intent of the February 7, 1990, Department of the Army/Environmental Protection Agency (EPA) Memorandum of Agreement concerning mitigation and the November 28, 1995, Federal Guidance For the Establishment, Use and Operation of Mitigation Banks. It is not the intent of this agreement to construe and/or alter the requirements and agency responsibilities as specified in existing law, regulation or policy.

Under this agreement, it will be the responsibility of Sponsor to successfully complete the following tasks:

1. Implement and maintain a forested wetland mitigation bank as specified in this agreement;
2. Execute and enforce a Conservation Servitude on lands contained within the mitigationbank;
3. Maintain current accounting records;
4. Perform monitoring as necessary to document success and/or failure of the mitigationbank;  
and



5. Conduct appropriate remedial action, if warranted.

The following agencies were involved in the development of this agreement and comprise the Mitigation Bank Review Team (MBRT) for the Lago Espanol Wetland Mitigation Bank:

U.S. Army Corps of Engineers, New Orleans District (NOD)  
U.S. Fish and Wildlife Service, Lafayette Field Office (FWS)  
U.S. Environmental Protection Agency (EPA), Region VI  
Louisiana Department of Wildlife and Fisheries (LWF)

Upon implementation of the mitigation bank, the MBRT will be responsible for:

1. Reviewing the sponsor's proposal and assure conditions of this agreement are complied with;
2. Reviewing post-implementation monitoring reports and transaction statements; and
3. Making decisions regarding the need for remedial action and mitigation credit adjustments.

The NOD will serve as chair of the MBRT and is responsible for conducting all meetings with the bank sponsor and agencies unless otherwise agreed to.

As the regulatory agency responsible for administering the Section 10 and Section 404 Permit Program, NOD will continue to make the final decisions regarding issuance of Department of the Army Permits, the type of compensatory mitigation which will be required and the amount of credit needed to compensate for impacts associated with a particular permit action. NOD will fully consider comments and recommendations offered by the federal and state resource agencies when making these decisions.

### III. PURPOSE AND OBJECTIVES OF THE MITIGATION BANK

The purpose of the Lago Espanol Wetland Mitigation Bank is to enhance and/or preserve productive bottomland hardwood and cypress-tupelo forested wetland ecosystems on approximately 4,046 acres of land in Ascension and Iberville Parishes as compensation for unavoidable losses of wetland functions and values as authorized by Department of the Army (DA) Section 10 and/or 404 permits. The Lago Espanol Wetland Mitigation Bank may only be used to compensate for impacts which remain after all appropriate and practicable measures have been explored by a permit applicant to avoid and minimize project-related impacts. In addition, only those wetland enhancement and preservation activities performed by Sponsor, without funding assistance from other public (state or federal) programs, may be used as mitigation. If state or federal programs are used offsite of the Mitigation Bank for the benefit of third parties and the programs' activities either directly or indirectly benefit the Mitigation Bank, then the Sponsor will not forfeit credits.



It is the intent of Sponsor to implement the enhancement activities for credits associated with Unit VIII prior to the distribution of any credits. Further, it is the intent of Sponsor to implement the enhancement activities associated with Units III through VII prior to and during the non-growing season beginning in December 1999. Upon approval of this agreement, in accordance with the Louisiana Conservation Servitude Act, a conservation burden will be placed on all lands contained within the mitigation bank. If after ten years from the date of placing a conservation burden on the entire Mitigation Bank there remains acreage that has not been used for the creation of mitigation credits, then the MBRT and Sponsor will review the mitigation project with the possible intent of releasing the unused acreage from the conservation burden. If the sponsor decides to remove acreage from the mitigation bank, then for the sole purpose of ecological benefit and contiguity of conservation lands, the MBRT reserves the right of prioritization of the placement of the conservation burden for any credits sold in conjunction with Units I and II. Through a contractual agreement with individual permit recipients, Sponsor will, for a fee to be paid by permittees, agree to implement any increment of mitigation as specified in DA permits and incur the responsibility for the long-term maintenance, management, protection and overall success of the bottomland hardwood and cypress-tupelo forested wetland enhancement and/or preservation. Sponsor acknowledges that an applicant for a DA permit will not be required to mitigate at the Lago Espanol Wetland Mitigation Bank. Rather, an applicant may, where appropriate and practicable, be given the option of using the Lago Espanol Wetland Mitigation Bank or propose other means or areas that would successfully meet compensatory mitigation requirements.

#### IV. EXISTING CONDITIONS

The proposed mitigation bank totals approximately 4,051 acres of primarily forested lands located within the Amite River hydrologic unit (U.S.G.S. Cataloging Unit 08070202) and encompasses portions of Bluff Swamp and Spanish Lake. The subject property is owned and managed by Sponsor. Ten Tracts, numbered 11 through 20, ranging in size from 81 acres to 1,411 acres form five separate units. There are three general habitat types present: bottomland hardwood distributary ridges, bottomland hardwood forest, and swamp. The distributary ridges are interspersed throughout the area and will be included in the bottomland hardwood community. The distributary ridges are at the highest elevations with typical bottomland hardwood communities at a slightly lower elevation. The distributary ridge and bottomland hardwood habitat types comprise approximately 1,750.13 acres of the mitigation bank. The peaks of the ridges are typically non-wetlands but represent an important component of the ecosystem. The adjoining bottomland hardwood communities experience seasonal backwater flooding. Dominant woody species composition consists of overcup oak, nuttall oak, willow oak, water oak, green ash, american elm, sugarberry, black willow, honey locust, and bitter pecan. Dominant shrub/sapling species include red maple, boxelder, sugarberry, swamp privet, deciduous holly, and planertree. Understory species consist primarily of *Smilax*, poison ivy, muscadine, rattan, and palmetto.

Baldcypress/tupelogum swamp found in the mitigation bank comprises approximately 1,751.39 acres. The swamp habitat is found in the lowest areas on the properties and is permanently or



semi-permanently inundated. Dominant vegetation is baldcypress and tupelogum, with red maple, black willow, sugarberry, bitter pecan, and swamp privet present.

Two subset habitat types also occur on the mitigationbank. These types are black willow swamp and fresh marsh, and are the result of degradation of portions of the bottomland hardwood and swamp habitat types. Approximately 253.56 acres have converted from the historical habitat types to domination by black willow from a lack of regeneration of original species composition due to extended hydroperiods. An additional approximately 242.63 acres have converted to a fresh marsh type system as a result of brine saturation, elevated water levels and increased hydroperiod which has inhibited natural regeneration of woody species.

Of the total acreage included in the mitigationbank, approximately 53.29 acres consist of roadways, open water, or pasture. These areas are not included in calculation of available credits. Maintenance of existing permatized roadways will be allowed.

The ecosystem of the Spanish Lake/Bluff Swamp basin suffers from adverse hydrological conditions. Since the turn of the century, numerous human activities have cumulatively resulted in altering the natural hydrology of the basin such that adverse conditions exist. The St. Gabriel oil and gas field was discovered. Numerous roads to access drill sites were constructed, some without culverts. Of those roads where culverts were installed, the majority of these culverts are only minimally functional or nonfunctional or are insufficient in number or size. Bayous Braud and Paul were excavated to provide improved drainage. The excavated material was placed adjacent to the dredged channels and functions as barriers to sheetflow. A levee was constructed and is maintained on the east side of Bayou Braud and Alligator Bayou and separates Bluff Swamp from the Spanish Lake area eliminating any water exchange between these areas. Water control structures were installed on bayous Alligator and Frog to control drainage from Spanish Lake and Bluff Swamp, respectively. The management of these structures has been primarily for maintenance of a set water level in Spanish Lake for recreational fishing. The overall result is what was once a large flood storage basin with little disruption in water exchange has been compartmentalized and the hydroperiods of the individual compartments vary, as do the water levels. Extended hydroperiods in areas have stressed stands of bottomland hardwoods and hindered regeneration of both hardwoods and baldcypress.

The distributary ridges and bottomland hardwood areas have reached maturity supporting merchantable timber. The swamp acreage also supports a mixture of merchantable timber, pulpwood, and mulch. The lands contained within the mitigation bank have historically been utilized by the property owners for silviculture purposes. Unless the subject acreage is accepted into a wetland mitigation bank, the property owners will accept recent proposals for the timber rights and continue the historical silviculture land use practices. While the area would remain a functioning wetland, these silviculture practices would result in an immediate diminishment of the habitat value of the area.

Primarily, four soil series classified by the Natural Resources Conservation Service (NRCS) are identified as occurring on the subject property. These include Sharkey clay, Sharkey clay,



frequently flooded, Galvez silty clay loam, and Fausse association. All are listed as hydric soils. Additionally, small areas of non-hydric Commerce silt loam or silty clay loam may occur. These small inclusions would be limited to ridges that are interspersed throughout the subject property.

The Sharkey series, which includes Sharkey clay and Sharkey clay, frequently flooded soils, are poorly drained, very slowly permeable. These soils formed on the lower part of natural levees of the alluvial plain in more than three feet of clayey sediments. Runoff and water movement through the soil is slow. The water table is found within one foot of the surface during the winter months. The wetness of the soil causes poor aeration and restricts the growth of plant roots.

Galvez silty clay loam is a poorly drained soil found on the natural levees on the alluvial plain. Runoff and water movement through the soil is slow; the water table is within three feet of the surface in the winter months.

The Fausse association is comprised of Fausse, Sharkey and Barbary soils. These soils are clayey, very poorly drained, and almost continuously flooded. This association is found in the backswamp area of the alluvial plain. Approximately 75 percent of this association is the Fausse soils and represent the intermediate elevation. The Sharkey soils are located at the higher elevations and the Barbary soils are at the lowest elevations.

The Commerce series soils are poorly drained, slowly permeable, and formed in the loamy sediment on the natural levees on the alluvial plain.

## V. WETLAND MITIGATION PLAN

### A. PRESERVATION

1. Approximately 1,750.13 acres of mature bottomland hardwood forest will be preserved by filing a conservation servitude on the subject property in accordance requirements specified in Section VIII of this agreement. This acreage encompasses all of Tracts 11 and 19, and portions of Tracts 12, 13, 15, 16, 17, 18, and 20. The preservation of this acreage will be referred to as Unit I.

Credits derived from the preservation of bottomland hardwood will be used primarily for projects where the impacted habitat is bottomland hardwood wetlands (in-kind functional replacement) and the impacted area continues to be a functional wetland; that is, project results in habitat diminishment or conversion. The management potential for Unit I has been calculated to be 0.33. Calculation of the credits required to fulfill compensatory mitigation requirements specified in DA permits will utilize this management potential. Unit I credits may be used for full impact projects; that is, projects in which the wetlands area converted to non-wetlands, should NOD determine that this form of compensatory mitigation is appropriate for a given project. In this situation, the calculation of the credits required to



fulfill compensatory mitigation requirements specified in DA permits will be twice (2x) the amount defined by the management potential to compensate for functions lost at the impacted site other than habitat.

2. Approximately 1,139.39 acres of baldcypress/tupelogum swamp will be preserved by filing a conservation servitude on the subject property in accordance with the requirements specified in Section VIII of this agreement. This acreage encompasses all of Tract 14 and portions of Tracts 13, 15 and 20. The preservation of this acreage will be referred to as Unit II.

Credits derived from the preservation of baldcypress/tupelogum swamp will be used primarily for projects where the impacted habitat is baldcypress/tupelogum swamp (in-kind functional replacement) and the impacted area continues to be a functional wetland; that is, project results in habitat diminishment or conversion. The management potential for Unit II has been calculated to be 0.15. Calculation of the credits required to fulfill compensatory mitigation requirements specified in DA permits will utilize this management potential. Unit II credits may be used for full impact projects; that is, projects in which the wetlands area converted to non-wetlands, should NOD determine that this form of compensatory mitigation is appropriate for a given project. In this situation, the calculation of the credits to be debited will be two (2) times the amount defined by the management potential.

#### B. ENHANCEMENT

1. Approximately 612.0 acres of baldcypress/tupelogum swamp will be enhanced through alteration of the existing hydrologic conditions. Breaks in the material deposited along the banks along Bayou Braud will be cleared to improve water exchange. Additional breaks along the Bayou's banks will be created, if necessary, to provide the appropriate degree of water exchange necessary to benefit the ecosystem. The breaks will be maintained in an open and functional capacity. The number, location and size of the breaks along the Bayou's banks will be identified in the required DA permit. A conservation servitude will be filed on the subject property in accordance with the requirements specified in Section VIII of this agreement. The enhancement of this acreage will be referred to as Unit III.

Fresh swamp species will be planted in Unit III in conjunction with the hydrologic improvements. As the area presently possesses a mature overstory with the desired species composition, Sponsor will under plant to enhance the regeneration of the area. Planting densities will vary based on edaphic conditions to ensure the initial criteria discussed in Section V.(D)(2). Seedlings will be randomly planted and will be spaced to accommodate any desired seedlings or mature trees. One to two year-old bare root seedling, 24-inches minimum, will be randomly planted and will be spaced to accommodate any desired saplings or mature trees.

The following species list and composition will be used in Unit III depending on the availability of the seedlings.



## BALDCYPRESS/TUPELOGUM SWAMP

Baldcypress (*Taxodium distichum*) - not less than 50 percent of total  
Tupelogum (*Nyssa aquatica*) - not to exceed 25 percent of total  
Drummond red-maple (*Acer rubrum* var. *drummondii*) - not to exceed 10 percent of total  
Buttonbush (*Cephalanthus occidentalis*) - not to exceed 10 percent of total  
Overcup oak (*Quercus lyrata*) - not to exceed 5 percent of total  
Green ash (*Fraxinus pennsylvanica*) - not to exceed 5 percent of total  
Pumpkin ash (*Fraxinus profunda*) - not to exceed 10 percent of total

Credits derived from performance of the enhancement activity described above will be used primarily for projects where the impacted habitat is baldcypress/tupelogum swamp (in-kind functional replacement). The management potential for Unit III has been calculated to be 0.37. Calculation of the credits to be debited will utilize this management potential.

2. Approximately 131.16 acres, comprising portions of Tracts 12 and 18, will be restored to bottomland hardwood forest. These areas have converted to a fresh marsh system from prolonged inundation due to lack of proper maintenance of existing culverts and improper size or number of culverts. The enhancement of this acreage will be referred to as Unit IV. To accomplish the enhancement, the Sponsor will perform the following actions:
  - a) Repair or replace existing culverts, and/or install additional culverts to ensure the appropriate degree of water exchange is provided. All culverts will be maintained in an open and functioning capacity.
  - b) Prepare, by mechanical or chemical means, controlled burning, or any combination thereof, depending on site conditions, those portions of the area which are to be planted during a given year.
  - c) Plant one to two year-old bare root seedlings 18-inches in length which have been properly handled to ensure viability in the prepared tract during the period of December 15 through March 15 (non-growing season). Depending on availability of seedlings, restored bottomland hardwoods shall consist of a combination of species as described below.

## BOTTOMLAND HARDWOODS

Hardmast Species (shall comprise not less than 60 percent nor greater than 70 percent of stand, and no one species to comprise greater than 30 percent)

Nuttall oak (*Quercus nuttallii*)  
Overcup oak (*Quercus lyrata*)



Willow oak (*Quercus phellos*)  
Water oak (*Quercus nigra*)  
Bitter pecan (*Carya aquatica*)

Softmast Species (shall comprise not less than 30 percent nor greater than 40 percent of stand, and no one species to comprise greater than 20 percent)

Green ash (*Fraxinus pennsylvanica*)  
Common persimmon (*Diospyros virginiana*)  
Drummond Red Maple (*Acer rubrum* var. *drummondii*)  
Sweetgum (*Liquidambar styraciflua*)  
Sugarberry (*Celtis laevigata*)  
American elm (*Ulmus americana*)  
Bald cypress (*Taxodium distichum*)  
Mayhaw (*Crataegus opaca*)  
Water-locust (*Gleditsia aquatica*)

The seedlings will be randomly planted on 12-foot spacings for a total initial stand density of at least 302 trees per acre and planted randomly as dictated by terrain and edaphic conditions to promote biodiversity.

- d) Maintain the site, on an as-needed basis, by use of mechanical or chemical controls or some combination, thereof. Fire lanes may be maintained around the perimeter of the planted tracts until such time that adequate crown closure occurs.
- e) Monitor and manage the site as described in Section IX of this agreement.
- f) File a conservation servitude on the subject property in accordance with the requirements specified in Section VIII of this agreement.

Credits derived from performance of the enhancement activities described above will be used primarily for projects where the impacted habitat is bottomland hardwoods (in-kind functional replacement). The management potential for Unit IV has been calculated to be 0.26. Calculation of the credits to be debited will utilize this management potential.

- 3. Approximately 30.56 acres, comprising a portion of Tract 18, have converted to a forested system dominated by black willow. Through improvement of the hydrologic conditions, elimination of the black willow component and subsequent planting with bottomland hardwood species, this area will be enhanced. The enhancement of this acreage will be referred to as Unit V. In addition to performing the activities described above in Section V B(2)(a) through Section V B(2)(f), the sponsor will chemically deaden black willow and other undesirable species prior to planting the area. Desirable species remaining following site preparation may be counted in the tree per acre requirements.



Credits derived from performance of the enhancement activities described above will be used primarily for projects where the impacted habitat is bottomland hardwoods (in-kind functional replacement). The management potential for Unit V has been calculated to be 0.24. Calculation of the credits to be debited will utilize this management potential.

4. Approximately 151.0 acres, comprising a portion of Tract 17, have converted to a forested system dominated by black willow. Through improvement of the hydrologic conditions, elimination of the black willow component and subsequent planting with fresh swamp species, this area will be enhanced. The enhancement of this acreage will be referred to as Unit VI. The restoration will employ the activities described above in Section V B(2)(a) through Section V B(2)(f), incorporating the following changes:

Black willow and other undesirable species will be chemically deadened prior to planting the area.

Planting spacing may be altered to accommodate any remaining desirable saplings or mature trees.

Desirable species remaining following site preparation may be counted in the density requirements.

The initial stand density shall not be less than 200 trees per acre and shall conform to the species list identified in Section V B(1).

Credits derived from performance of the enhancement activities described above will be used primarily for projects where the impacted habitat is baldcypress/tupelogum swamp (in-kind functional replacement). The management potential for Unit VI has been calculated to be 0.19. Calculation of the credits to be debited will utilize this management potential.

5. Approximately 72.0 acres, comprising a portion of Tract 13, have converted to a forested system dominated by black willow. Through improvement of the hydrologic conditions, elimination of the black willow component and subsequent planting with fresh swamp species, this area will be enhanced. The enhancement activities will conform to those described above in Section V B(4). Enhancement of this acreage will be referred to as Unit VII.

Credits derived from performance of the enhancement activities described above will be used primarily for projects where the impacted habitat is baldcypress/tupelogum swamp (in-kind functional replacement). The management potential for Unit VII has been calculated to be 0.26. Calculation of the credits to be debited will utilize this management potential.

6. Approximately 111.47 acres, comprising a portion of Tracts 16, have converted to a fresh marsh system from prolonged inundation due to lack of proper maintenance of existing



culverts and improper size or number of culverts. The enhancement activities will conform to those described above in Section V B(4) with the exception that black willow is not required to be deadened. The enhancement of this acreage will be referred to as Unit VIII.

Credits derived from performance of the enhancement activities described above will be used primarily for projects where the impacted habitat is baldcypress/tupelogram swamp (in-kind functional replacement). The management potential for Unit VIII has been calculated to be 0.27. Calculation of the credits to be debited will utilize this management potential.

### C. GENERAL REQUIREMENTS FOR UNITS I - VIII

To ensure the characteristics and diversity indicative of viable native bottomland hardwood or baldcypress/tupelogram wetland communities, the sponsor will control through removal by chemical or mechanical means exotic or noxious plant species (e.g., Chinese tallow). Additionally, insect-damaged, diseased, or storm-felled trees may be removed subject to approval by the MBRT.

### D. SUCCESS CRITERIA AND RELEASE OF CREDITS

#### 1. Preservation: Units I and II

Upon filing a document in the real property records of Ascension and Iberville Parishes that establishes a conservation servitude on the property as specified in Section VIII of this agreement, credits will be made available for use to Sponsor. Copies of the document filing, for both Parishes, will be provided to NOD. Establishment of the conservation servitude will ensure preservation of the environmental attributes associated with the subject property.

#### 2. Enhancement:

Units III, IV, V, VI and VII

Credits will be made available for use upon receipt by NOD of a copy of the document filed in the appropriate Parish or Parishes which establishes a mitigation servitude on the subject property as specified in Section VIII of this agreement. The enhancement activities must occur no later than the growing season identified in DA permit special conditions.

In order to be considered fully successful, the enhanced areas must result in viable forested wetlands of the designated habitat type capable of performing functions inherent to wetlands lost as a result of project implementation via Corps permits. The following criteria will be used to gauge the success of the restoration component of the mitigation effort:



### Initial Criteria

- a) Culverts and breaks must be maintained in good working order at all times and of sufficient number and size to provide for the appropriate degree of water exchange required to ensure a viable plant community of the designated habitat type.
- b) For a given planting, a minimum of 50 percent (150 seedlings per acre for bottomland hardwood restoration, 100 seedlings per acre for baldcypress/tupelogum swamp) must survive through the end of the first complete growing season (50 percent of the trees planted per acre for Unit III). In bottomland hardwood enhancement areas at least 65 percent of the surviving seedlings must consist of hard mast-producing species. In baldcypress/tupelogum enhancement areas at least 50 percent of the surviving seedlings must be baldcypress. This criterion will apply to initial plantings as well as any subsequent replantings, which may be needed. This criterion does not apply to Unit III.
- c) For a given planting, a minimum of 125 trees per acre for bottomland hardwoods or 50 baldcypress trees per acre for baldcypress/tupelogum swamp must survive through the end of the fourth growing season (i.e., Year 5) following successful attainment of the one year (i.e., Year 1) survivorship criterion described in item (b) above. Trees established through natural recruitment of the same age may be included in this tally. Stand composition must comply with the criterion as described in item (b) above. For Unit III only, after the fourth growing season (i.e. Year 5) the stand must be comprised of not less than 50 baldcypress trees per acre and 25 percent of any planted seedlings must have survived.
- d) By year 5, any enhanced tract should have an established midstory with a least 75 stems per acre. Species composition shall reflect enhancement plan design. If the midstory does not meet the enhancement plan standards as determined by the MBRT, additional plantings and/or additional breaks in the banks of Bayou Brand may be required.

### Long-Term Criteria

- a) Planted tracts must respectively exhibit characteristics and diversity indicative of a viable native bottomland hardwood or baldcypress/tupelogum wetland communities which are commensurate with the age of the stand and site conditions.
- b) Timber thinning and/or harvesting may be performed pursuant to an approved timber harvest plan outlined below in Section V (E).
- c) Human activities, which may cause the degradation of wetland habitat within the mitigation bank, shall not occur without expressed written authorization from MBRT and NOD.



### Unit III

The following success criteria will also apply for Unit III:

- a) By year 3 following performance of the activities identified in Section V (B)(1), aerial coverage by scrub/shrub species must be a minimum of 40 percent, and herbaceous coverage must exceed 20 percent.
- b) By year 10 following performance of the activities identified in Section V (B)(1), demonstration of successful baldcypress natural regeneration sufficient to ensure the area is capable of sustaining itself in a form similar to that required of the baldcypress/tupelogum restoration areas.

### Unit VIII

The success criteria for Unit VIII is the same as that identified for Units III through VII. However, credits will not be made available until successful attainment of the initial criteria (a) and (b) by the end of the second growing season following plantings. Criteria (c) and (d) remain in effect, as well as the long term criteria.

### E. TIMBER HARVEST

Timber harvests subject to permitting requirements of the Clean Water Act, if applicable, and approval by the MBRT may be conducted within Lago Espanol Wetland Mitigation Bank for the sole purpose of maintaining and enhancing timber stand and wildlife habitat quality and diversity. Sponsor shall submit a timber harvest plan for a specific site within Lago Espanol Wetland Mitigation Bank. The timber harvest plan will be forwarded to the MBRT for comment. The NOD has forty-five (45) days from the date of receiving the timber harvest plan to inspect, review and approve or deny the plan. If the Sponsor has not received express written consent, denial, or request for revisions from NOD within the forty-five (45) calendar day period required above, then Sponsor can consider the timber harvesting plan approved by the NOD. No work may proceed without the express written consent of NOD. The timber harvest plan should, at a minimum, conform to the following conditions:

- 1) In no case will the entire forested stand in a given tract be clear-cut.
- 2) Stands with trees averaging 6 inches diameter at breast height (dbh), typically measured 4.5 feet from ground level, shall not be thinned below 30 square feet of basal area per acre, and stands averaging 8 inches dbh or more shall not be thinned below 40 square feet of basal area per acre.
- 3) Species composition and/or ratio of hard mast to soft mast-producing species shall



be maintained during all harvest events. Harvested tracts will be replanted, as necessary, with appropriate species.

- 4) Identification of the boundaries of the specific location proposed to be harvested, the method of conducting the harvest, the type of harvest to be conducted, method of restoration, if necessary, and the criteria for defining the harvest.
- 5) Loading and transport of harvested timber within an approved compartment shall be accomplished by using existing roads and log-loading decks not to exceed 1 acre in size.
- 6) Surface contours of any existing unimproved access roads rutted by heavy wheeled or track-type logging equipment shall be restored to pre-existing grade to the maximum extent practicable.
- 7) At least 3 den and/or cavity trees per acre, if available, shall be preserved throughout harvests. Upon their death, other mature trees shall be identified as den trees so that a minimum of three den trees per acre is present at all times.
- 8) Following any timber harvest, Sponsor shall conduct a post-harvest inspection in accordance with Section IX of this agreement to verify compliance with the timber harvest plan.

#### **F. PERMIT REQUIREMENTS**

The maintenance or replacement of existing culverts, installation of new culverts, and the creation of breaks, existing or new, along the banks of Bayou Braud are activities regulated under Section 404 of the Clean Water Act. Prior to performing these activities, Sponsor must obtain the appropriate Department of the Army permit(s) and any other Federal, state or local approvals as may be required. NOD will process DA permit requests for the enhancement activities as expeditiously as is practicable. It appears that the enhancement activities may qualify for authorization by nationwide permit number 27.

#### **VI. MANAGEMENT OR MITIGATION POTENTIAL OF PRESERVATION AND ENHANCEMENT ACTIVITIES**

Because of the difficulty involved in quantitatively measuring the entire array of functions a wetland may perform, habitat quality was used as the basis for determining the amount of wetland mitigation credit which would be produced by bottomland hardwood or baldcypress/tupelogum swamp enhancement and preservation efforts at the Lago Espanol Wetland Mitigation Bank. The habitat assessment models for bottomland hardwoods and swamp were developed by the State of Louisiana, Department of Natural Resources to complement the Wetland Value Assessment Models developed by the Environmental Work Group for evaluation



of projects considered for construction pursuant to the Coastal Wetlands Planning, Protection, and Restoration Act. The habitat assessment models are based on the U.S. Fish and Wildlife Service's Habitat Evaluation Procedure (HEP). Habitat quality of the mitigation bank was measured using the January 10, 1994, Habitat Assessment Models for bottomland hardwoods or swamps, whichever was appropriate.

Within the areas to be enhanced mitigation credit will be given for the net increases in value (i.e., habitat quality) attributable to the mitigation features described in Section V of this agreement. In order to calculate this increase in value, it was necessary to determine the habitat value which the bottomland hardwood wetlands and baldcypress/tupelogram swamps in the mitigation area would provide over a specified period of time (assessment period) if the mitigation features were not implemented (Future Without Project or FWOP). An assessment period of 50 years was used for the purpose of calculating the bottomland hardwood and baldcypress/tupelogram swamp wetland value at the Lago Espanol Wetland Mitigation Bank. The FWOP value was then subtracted from the value which would be provided if the mitigation features are implemented (Future With Project or FWP). The per acre net increase in value, averaged over the 50 year assessment period, is equivalent to the management or mitigation potential of the mitigation effort. The management potential will be used to determine the number of mitigation credits to be deducted from the account balance to compensate for the adverse impacts to wetlands associated with a given permit action. The 50-year assessment period is for calculation purposes only and is not the limit of operation and maintenance liability created by the utilization of this agreement, which is liability in perpetuity.

Lands within the preservation portions of mitigation area currently consist of primarily mature bottomland hardwood forests and baldcypress/tupelogram swamps and are considered to have a high value as wetland and wildlife habitat. Without implementation of the mitigation features, the property is subject to silviculture activities. Subtracting the average annualized FWOP value from the FWP value and dividing the difference by the total acreage of the specific mitigation project equates to the management or mitigation potential of the eight identified mitigation areas within Lago Espanol Wetland Mitigation Bank.

A copy of the completed assessments for each of the eight (8) distinct mitigation efforts is included as Attachment B.

The projected management or mitigation potential for the Lago Espanol Wetland Mitigation Bank will remain in effect unless changed by the MBRT due to failure to achieve success criteria or due to activities which affect the quantity or quality of wetland habitat within the mitigation bank as specified in Section IX.

## **VII. PROCEDURES FOR USING THE MITIGATION BANK**

Utilization of the Lago Espanol Wetland Mitigation Bank to compensate for impacts associated with a DA permit must be approved by NOD on a case-by-case basis. Costs associated with performing mitigation and fees charged to permit recipients for use credits accrued at the Lago



Espanol Wetland Mitigation Bank will be determined by Sponsor.

During the review of any application for an individual DA permit, NOD will require that all appropriate and practicable steps be taken to avoid and/or minimize potential impacts to wetlands. After all such measures have been incorporated into the project, NOD will investigate the availability and suitability of mitigation measures, which may be necessary to compensate for unavoidable wetland impacts. Should NOD, after consulting with other interested resource and regulatory agencies as necessary, determine that use of this area is appropriate and preferable to onsite mitigation and other offsite mitigation, the applicant will be given the option of fulfilling his compensatory mitigation requirements by contracting with Sponsor to perform the mitigation on his behalf at the Lago Espanol Wetland Mitigation Bank. NOD will advise the applicant of this option and inform him of the number of credits from a specific mitigation area necessary to fully mitigate his project. NOD will calculate the credits required to compensate for the remaining unavoidable wetland impacts of the applicant's project as follows:

1. The impact of the applicant's project will be determined using the January 10, 1994, bottomland hardwood or swamp Habitat Assessment Model, whichever is appropriate. Other assessment methodologies may be substituted as necessary. (For projects resulting in wetland impacts of 1 acre or less, NOD may elect to apply best professional judgement with a minimum 1:1 replacement ratio).
2. The impact of the applicant's project, expressed as net loss of Average Annualized Habitat Units (AAHUs), will be divided by the management or mitigation potential of the mitigation area in effect at the time the impact is proposed. The result will represent the minimum amount of compensatory mitigation required.

If the applicant agrees to fulfill his compensatory mitigation requirements by contracting with Sponsor, NOD will condition the DA permit accordingly. The permit conditions will specify the number of the mitigation area and number of credits to be deducted. The permit conditions will require the applicant to provide NOD with a copy of the contractual agreement with Sponsor.

Upon receipt of a NOD approved request from a permittee to perform mitigation, Sponsor will verify that sufficient credits are available in the specified area. Sponsor will then execute a contract with the permittee which specifies that Sponsor will perform the mitigation required in the Corps permit and will incur the responsibility for the long-term management, maintenance, monitoring and protection of the mitigation wetlands.

Sponsor shall place funds collected from permittees during the course of each year in a federally-insured account and shall utilize these funds to perform the enhancement activities that year. Prior to accepting funds for credits associated with enhancement activities, Sponsor shall establish a financial mechanism, as described in Section X of this agreement, to ensure that sufficient funds are available to perform the agreed-upon mitigation on that tract, to perform corrective actions as needed to meet applicable success criteria and to cover the costs of long-term maintenance and monitoring of the tract. If, for any reason, the accrued funds are insufficient to



perform the mitigation activities specified in the contracts executed during that year, Sponsor shall make up for the shortfall to ensure that the appropriate mitigation activity has been completed.

Sponsor may perform enhancement activities in excess of that needed to satisfy contractual obligations for a given year and apply associated credits to future mitigation requests. All such over activities must be documented in a report to NOD, as specified in Section XI. Under no circumstances may Sponsor commit to credits which are not available, nor shall Sponsor mitigate to credits which have been previously debited as mitigation for other projects.

To the extent appropriate and practicable, the Lago Espanol Wetland Mitigation Bank will be used to compensate for unavoidable wetland impacts occurring primarily within U.S.G.S. hydrologic cataloging unit 08070202, and secondarily within U.S.G.S. hydrologic subregion 0807. However, NOD may, if determined appropriate, allow the area to be used to compensate for impacts occurring outside the recognized area.

The Lago Espanol Wetland Mitigation Bank will typically be used for in-kind replacement of forested wetlands and their functions and values. NOD may, however, allow the use of Lago Espanol Wetland Mitigation Bank credits to compensate for impacts to dissimilar wetland types on a case-by-case basis after coordinating with the appropriate resource agencies. Decisions regarding such "out-of-kind" mitigation will consider the availability and practicability of in-kind mitigation and the relative importance of the impacted wetlands as well as wetlands within the mitigation area.

#### VIII. LONG-TERM MAINTENANCE AND PROTECTION

Sponsor, or assigns or purchasers, shall be responsible for maintaining and protecting lands contained within the mitigation area boundaries in perpetuity, unless the mitigation area lands are transferred to a state or Federal resource agency or non-profit conservation organization. Perpetual protection and appropriate management and maintenance shall be specified in a document prepared in accordance with the Louisiana Conservation Servitude Act (R.S. 9:1271 et seq.) and filed in the real property records of Ascension and Iberville Parishes that establishes a conservation servitude on the property prior to performing mitigation at the Lago Espanol Wetland Mitigation Bank. The conservation servitude shall warrant clear title and is to run with and be a burden on the land in perpetuity for Sponsor, or assigns, and all subsequent purchasers of the land. The conservation servitude shall stipulate that Sponsor has entered into an agreement with the U.S. Army Corps of Engineers for the establishment of the mitigation bank and that Sponsor has accepted the provisions specified in this agreement. The conservation servitude shall further specify that lands within the mitigation bank are to be managed and maintained for the express purpose of performing wetland functions and, as such, cannot be altered in a manner contrary to this purpose without prior approval from the Corps. In keeping with this requirement, the covenant shall specify restricted use of the property as follows:

- a) There shall be no placing, filling, storing, or dumping on the property of refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, or other such items.



- b) There shall be no future commercial, industrial, agricultural or residential uses of the property with the exception of oil and gas resource exploration and extraction activities approved by DA permit(s).
- c) There shall be no mechanized land clearing or deposition of soil, shell, rock or other fill on the property without written authorization from the Corps of Engineers.
- d) There shall be no cutting, removal or destruction of vegetation on the property except in accordance with control of competitive grasses/shrubs required for site preparation and/or in accordance with the timber management plan as specified in this agreement and appropriate DA permits.
- e) There shall be no grazing of cattle or other livestock on the property.
- f) All other activities, which are inconsistent with the establishment, maintenance and protection of wetlands and the associated habitat values within the mitigation bank and which are not subject to Corps of Engineers regulatory authority, are prohibited.

A copy of the conservation servitude shall be provided to NOD for review and approval prior to filing in the real property records of Ascension and Iberville Parishes. After filing, a copy of the recorded conservation servitude, clearly showing the book, page and date of filing, will be provided to NOD. For each year in which credits are debited from the Lago Espanol Wetland Mitigation Bank, Sponsor shall provide to NOD a plat indicating the location and size of the tract associated with the credits.

The conservation servitude and restrictions therein shall not prevent the continuation of pre-existing uses of the property that do not conflict with the establishment and maintenance of the mitigation bank. The conservation servitude shall allow certain future uses of the property, including hunting, fishing, trapping, non-consumptive recreational pursuits and timber harvesting conducted pursuant to an approved timber harvest plan as identified in Section V (E) of this agreement. The conservation servitude shall run with the land and shall be binding on and all future owners or users of the property but shall be subject to modification through mutual consent by Sponsor, the grantor of the servitude and the Corps.

Waters of the United States including all wetlands situated within the mitigation bank would be subject to all applicable requirements established under the CWA. As such, DA permits will be required for the deposition of dredged or fill material, including mechanized land clearing, in these areas. All requests for permits within the mitigation bank will be coordinated with the MBRT; however, decisions regarding the issuance of such permits will be made by NOD in accordance with applicable permit regulations and guidance and in consideration of impacts to any portion or all of the Lago Espanol Wetland Mitigation Bank. In making its decision, NOD will consider the fact that wetlands within the Lago Espanol Wetland Mitigation Bank have been enhanced and/or preserved to mitigate other wetland impacts. Timber harvesting activities which result in the



deposition of dredged or fill material may require a DA permit. Timber harvests shall be conducted in accordance with an approved timber harvest plan as specified in Section V(B) of this agreement.

If a decision is made to authorize activities in any portion of the Lago Espanol Wetland Mitigation Bank, and such activities affect the quantity or quality of wetlands or functioning of the bank, the permit recipient will be required to compensate for the loss of wetland value associated with his project. The amount of compensation required will be based upon the acreage of wetlands impacted and the ultimate anticipated value of the impacted wetlands. Impacts to wetlands within the Lago Espanol Wetland Mitigation Bank shall be mitigated by debiting the appropriate credits from the mitigation area, if sufficient credits are available. In cases where sufficient credits are not available, the permittee will be responsible for fulfilling all or part of his compensatory mitigation requirement elsewhere, as approved by NOD.

Should the MBRT determine that an activity or activities authorized within the Lago Espanol Wetland Mitigation Bank would likely affect the management or mitigation potential of the mitigation bank, the MBRT shall coordinate with Sponsor and recalculate the management potential using the appropriate assessment methodology. The recalculated management potential will not affect credits which have already been debited but will be used to determine the appropriate credits necessary for future activities using the mitigation bank as compensatory mitigation.

#### IX. MONITORING, REPORTING AND CORRECTIVE ACTIONS

Sponsor shall, upon written request, allow any member of the MBRT access to the mitigation area for the purpose of inspecting the condition of the area. Sponsor shall perform annual monitoring of the mitigation bank to verify that success criteria described in Section V have been met and to validate compliance with the terms of the mitigation servitude and this agreement. Non-scheduled monitoring reports shall be provided to NOD and made available to other members of the MBRT upon written request. In the event monitoring reveals that initial success criteria have not been met, Sponsor shall take measures to achieve the mandatory success criteria the following year. Monitoring, reporting and remedial action shall be conducted in accordance with the following procedures:

1. Sponsor shall conduct a survey of living and dead seedlings in each planted tract at or near the end of the first growing season following initial planting. Tracts of 3 acres or less shall be surveyed in accordance with an accepted academic or industrial sampling methodology. Seedling survival on tracts greater than 3 acres shall be documented by performing a comprehensive tally or by counting seedlings in rows or sample plots selected at random from within the tract. The number and orientation of rows or plots used in the sample will vary, depending on the size and configuration of the tract, but must be representative of the tract and must account for at least 5 percent of the total number of seedlings planted in that tract. In addition, Sponsor shall perform a cursory examination of the entire planted tract to determine if overall survival is adequate.



2. Sponsor shall, within 60 days following the initial survival survey, provide a written report to NOD indicating the number and species of living seedlings. The report shall also describe the condition of applicable drainage structures, the overall condition of the seedlings, and identify likely causes for observed mortality within those tracts which did not exhibit the appropriate seedling survival rate.
3. If survival criteria is not met as determined by sampling or by observing high mortality in any zone or location within a planted tract, Sponsor shall take appropriate actions, as recommended by the MBRT, to address the causes of mortality and shall replace all dead and/or missing seedlings with new in-kind plantings during the following non-growing season during which appropriate seedlings are available. Replanting, in accordance with this paragraph, and monitoring and reporting, as described in items 1 and 2 above, shall occur annually as needed to achieve and document the required survival rate.
4. If the survival criterion is not met after three unsuccessful attempts, NOD will convene a meeting of the MBRT and Sponsor to decide if replanting should continue. Should the MBRT determine that achieving the required survival rate would not be likely, Sponsor shall be required to provide replacement mitigation for the increment of value which did not accrue within the unsuccessful tracts. Replacement mitigation shall be implemented within one year following the decision to abandon replanting efforts. In addition, the MBRT will reassess the mitigation area to determine if a change in the mitigation or management potential is warranted or if use of the mitigation area should be discontinued. If warranted, a new mitigation or management potential shall be calculated using an appropriate assessment methodology to be determined by the MBRT.
5. Sponsor shall continue annual monitoring and reporting of each planting effort, in accordance with the plan described in item 1 above, to verify attainment of the survival criteria in the fourth growing season following successful attainment of Year 1 survivorship and composition criteria. Sponsor shall implement appropriate remedial action to ensure attainment of Year 5 survivorship and composition criteria.
6. Upon attainment of Year 5 criteria in all planted tracts comprising the mitigation area, Sponsor shall randomly establish eight (8), one-tenth-acre permanent continuous forest monitoring plots within in each of the bottomland hardwood enhancement areas and cypress-tupelo enhancement areas. Each plot center shall be identified by a permanent marker, and all trees falling within the monitoring plot shall be permanently tagged and numbered. Sponsor shall, by March 31 of the following year, provide a report to NOD indicating the locations of the plots and documenting the number, species, height and diameters of tagged trees within each plot. The report shall also discuss the general health of the planted trees, describe the vegetative communities (overstory, midstory and understory) developing within and the overall condition of each Unit of the entire mitigation bank. Upon receipt of this report by NOD and confirmation that the mitigation bank is progressing as anticipated, Sponsor may cease annual monitoring and begin monitoring the continuous forest monitoring plots and submitting



monitoring reports to NOD at 5 year intervals for 50 years after initiation of criteria for release of credits within a specific Unit of the mitigation bank.

7. Sponsor shall, on an annual basis, provide the results of inspections to be performed every four (4) months of all drainage structures, and a description and map showing the location of any remedial action required. The annual report and inspections will be performed for fifty (50) years after initiation of criteria for release of credits within a specific Unit of the mitigation bank. The Sponsor shall, prior to performing the enhancement activities required and on an annual basis following performance of those activities, provide information documenting the species composition and percentage of coverage of the various vegetative zones (i.e., overstory, mid-story or scrub/shrub, and herbaceous) in Unit III. Upon attainment of success criterion (a) for Unit III, annual monitoring may cease. At year 10 following performance of the enhancement activities, a report documenting the presence (or lack thereof) and extent of natural regeneration of baldcypress in Unit III shall be provided to NOD. Failure to achieve criterion (b) may require remedial actions to be performed, at the sole expense of the sponsor.
8. In addition to the monitoring requirements specified above, Sponsor shall conduct a post-harvest inspection of all tracts from which timber was harvested. During the inspection, Sponsor shall record the area in which harvests occurred, the approximate basal area of standing timber by species (if applicable) and the number and species of seedlings which were replanted. Post-harvest inspection reports shall be submitted to NOD by December 31 of the year in which the harvest was completed.

The management or mitigation potential may be adjusted by the MBRT at any time should an Act of God or human-induced activity adversely affect the value or functioning of the mitigation area. Any adjustments to the management or mitigation potential will, except as noted below, apply only to future plantings within the bank and will not affect those tracts which have already been planted.

In the event Sponsor fails to comply with this mitigation area agreement or the mitigation servitude, Sponsor will be required to immediately perform corrective actions, such as replanting and repair or replacement of culverts. NOD will temporarily suspend use of the mitigation bank pending the return of the area to conditions as specified in this agreement and mitigation servitude. NOD will then convene a meeting with Sponsor and the MBRT to determine if a reassessment of the management or mitigation potential is necessary. If remedial action is not taken within one year, the MBRT will cease recognition of the Lago Espanol Wetland Mitigation Bank, and Sponsor will be required to implement mitigation, as approved by NOD, to replace all mitigation which had been performed at the mitigation bank.

#### X. FINANCIAL ASSURANCES

Sponsor shall establish a financial mechanism for the Lago Espanol Wetland Mitigation Bank to ensure that sufficient funds are available to perform forested wetland restoration and necessary



hydrologic improvements on contracted mitigation acreage as stipulated in this agreement, to perform subsequent corrective actions which may be needed to meet applicable success criteria (e.g., replanting seedlings, repairing hydrological controls such as culverts, breaks in banks along Bayou Braud) and to monitor and maintain the mitigation bank. Such financial assurances may be in the form of a surety bond, Irrevocable Letter of Credit, or escrow account. If a surety bond is used, the bond shall normally be written by a surety company which is on the most recent U.S. Department of the Treasury Financial Management list of approved bonding companies as published in the Federal Register. If an Irrevocable Letter of Credit or an escrow account is used, the letter or account must be provided by a federally-insured depositor that is "well-capitalized" or "adequately-capitalized" as defined in Section 38 of the Federal Deposit Insurance Act. The dollar amount of financial assurance needed shall be determined based upon the sponsor's projected cost to implement, manage, and maintain the required mitigation; however, the final amount must be approved by NOD. The financial assurance must guarantee performance as identified in this agreement or must guarantee payment of funds to an agency or non-profit conservation entity approved by NOD in the event Sponsor is unable or unwilling to fulfill the obligations as specified in this agreement. Financial assurances will be released on an incremental basis approved by the MBRT.

## **XI. ACCOUNTING PROCEDURES**

Sponsor will be responsible for keeping a current ledger of all transactions at the Lago Espanol Wetland Mitigation Bank. The ledger shall document the following:

- 1) Name and permit number for each permit recipient who has contracted with Sponsor for mitigation;
- 2) Date contract was executed;
- 3) Credits to be deducted from the specific mitigation bank and current balance;
- 4) Detailed description of the location and type of any mitigation activity performed, and;
- 5) Map showing the approximate boundaries of the debited credits.

Sponsor shall normally submit this information to NOD by March 31 of each year following the initial debiting but shall provide information on any or all transactions to NOD at any time, upon written request.

## **XII. ADDENDUMS TO THE MITIGATION BANK**

This agreement may be amended to extend mitigation credits for additional enhancement associated with hydrologic improvement activities to areas where the sole basis of mitigation credit is currently preservation on the Lago Espanol Wetland Mitigation Bank as agreed upon by



the MBRT and Sponsor. Specifically, additional credits for Unit II may be generated through basin-wide hydrologic improvements. Management of any structures associated with the hydrologic restoration activities will be subject to the policies set forth in the addendum. A separate assessment will be conducted to determine the incremental benefit to be derived from the hydrologic restoration activity and the number of credits to be made available to Sponsor. Each addendum will immediately become part of this agreement and will be supplied to cosignatories to this agreement.

Subject to approval by the MBRT, Sponsor will be allowed the latitude to comply with new techniques, guidance, and practices. At any time, Sponsor may request minor changes/alterations be made to the overall and/or specific items of the plan. Any requested change accepted by the MBRT will become part of this agreement and be supplied to co-signatories to this agreement.

### XIII. VALIDITY OF THIS AGREEMENT

This agreement is subject to written modification as mutually agreed to by the MBRT and Sponsor for such reasons as significant policy or regulation changes. No recourse will be taken against any individuals who have contracted with Sponsor prior to such modifications, nor against said parties in the event the agreement is terminated. Nothing in this agreement shall be construed as altering responsibilities or empowering new authorities of the signatory agencies.

If circumstances warrant, such as misapplication, improper management or non-compliance with the terms of this agreement by Sponsor, NOD and other members may void their recognition of the Lago Espanol Wetland Mitigation Bank as well as terminate their participation in this agreement. As waters of the United States, any subsequent discharges in the area would require Section 404 authorization and the protective servitude placed on lands which have already been designated for use as mitigation shall remain in place..

### XIV. TRANSFER OF AREA OPERATION

Operation of the Lago Espanol Wetland Mitigation Bank may be transferred to a private conservation entity or State or Federal resource agency upon approval by the MBRT. Approval of transfer by the MBRT may not be unreasonably withheld. If operation of the area is transferred to a private conservation entity, title to all of the mitigation bank, remaining management and administration in the area will be transferred to the new area operator, subject to a perpetual covenant that guarantees operation of the area as described in this agreement. The mitigation bank lands, if transferred to a State or Federal resource agency, may become a part of the overall management of a larger area, such as a wildlife management area, and the covenants on the mitigation lands may be changed accordingly provided such changes meet with the approval of the MBRT. Upon transfer to the new operator, that operator will become the Sponsor who will fully assume all responsibilities and liabilities placed upon the Sponsor by this mitigation agreement.

Signed:



Bruce M Monroe  
BRUCE M. MONROE  
LAGO ESPANOL, L.L.C.  
MITIGATION BANK SPONSOR

2-9-99  
DATE



LTC, EN  
ACTING CDR

  
WILLIAM L. CONNER  
COLONEL, EN  
COMMANDING

4 FEB 99

DATE



DAVID W. FRUGE, FIELD SUPERVISOR  
U.S. FISH AND WILDLIFE SERVICE

DATE



*W. B. Hathaway*

*2/5/99*

WILLIAM B. HATHAWAY, DIRECTOR  
WATER QUALITY PROTECTION DIVISION  
ENVIRONMENTAL PROTECTION AGENCY, REGION VI

DATE



INTERAGENCY AGREEMENT FOR LAGO ESPANOL LLC - LAGO ESPANOL WETLAND MITIGATION BANK

  
\_\_\_\_\_  
JAMES H. JENKINS, SECRETARY  
LOUISIANA DEPARTMENT OF WILDLIFE  
AND FISHERIES

2/8/99  
DATE



Phillip R. Anderson  
PHILLIP R. ANDERSON  
MAJOR GENERAL  
U.S. Army Division Engineer

9 February 1979  
DATE



# Iberville Parish

## 2010 Gate Resolution



## Iberville Parish Recording Page

J. G. "BUBBIE" DUPONT, JR  
CLERK OF COURT  
P.O. BOX 423  
Plaquemine, LA 70765  
(225) 687-5160

### First VENDOR

IBERVILLE PARISH COUNCIL

### First VENDEE

SPANISH LAKE MITIGATION LLC

Index Type : Conveyance

File # : 929

Type of Document : Conveyance

Book : 612

Entry : 150

Recording Pages : 23

### Recorded Information

I hereby certify that the attached document was filed for registry and recorded in the Clerk of Court's office for Iberville Parish, Louisiana

On (Recorded Date) : 03/22/2010

At (Recorded Time) : 1:56:10PM



Doc ID - 001189850023

*Nancy Lopez*  
Deputy Clerk



Do not Detach this Recording Page from Original Document



1000 2 01 2017

*Landowners own 8'K out of 14K acres*

**SPANISH LAKE/ALLIGATOR BAYOU FLOODGATE  
DRAINAGE AGREEMENT**

Before the undersigned notaries, duly commissioned and qualified in and for the Parish(es) and State hereinafter set forth, and before the undersigned competent witnesses, personally came and appeared:

**The Iberville Parish Council**, herein represented by its Parish President, J. Mitchell Ourso, Jr., acting under the authority of Ordinance No. 2010-007 adopted by the Iberville Parish Council, attached hereto and made a part hereof as Exhibit "A," having its principal place of business at 58050 Meriam Street, Plaquemine, Louisiana 70764 (hereinafter referred to as "Iberville Parish") and

**Spanish Lake Mitigation, L.L.C.**, a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 20104 Phillips Road, Baton Rouge, Louisiana 70817, herein represented by Manager, Jay LeBlanc; and

**Land Investments of Louisiana, Inc.**, a corporation organized under the laws of the State of Louisiana, having its principal place of business at 18019 East Augusta, Baton Rouge, Louisiana 70810, pursuant to a Resolution of its Board of Directors which was adopted at the meeting held on March 17, 2010, a certified copy of which is annexed hereto as Exhibit "B" herein represented by President, Ramon Jarrell; and

**Jarrell Holdings, L.L.C.**, a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 18019 East Augusta, Baton Rouge, Louisiana 70810, herein represented by its President, Ramon Jarrell,

**Spanish Lake Restoration, L.L.C.**, a Louisiana limited liability company, organized under the laws of the State of Louisiana, having its principal place of business at 4664 Jamestown Avenue, Suite 400, Baton Rouge, Louisiana 70808, herein represented by its duly authorized Manager, Conservation Land Management, L.L.C., appearing herein through its duly authorized Manager, Scott P. Nesbit;

**First Louisiana Resource, Inc.**, a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 108 Third Street, Baton Rouge, Louisiana 70801, herein represented by its Manager, Leonard R. Nachman II; (hereinafter collectively referred to as "Property Owners").



For mutual consideration, Iberville Parish and the Property Owners hereby agree as follows:

1. Collectively, the Property Owners are the owners of approximately 8,000 acres of property located in the Spanish Lake Basin area, situated primarily in Iberville and Ascension Parish, Louisiana. The respective property owned by each Property Owner is described in Exhibit "C" in globo (hereinafter collectively referred to as the "Property").

2. Iberville Parish is the owner and operator of the Alligator Bayou Floodgate ("Floodgate") located at the convergence of Alligator Bayou and Bayou Manchac in Iberville Parish, Louisiana.

3. In the past, the Property has been subject to high water at certain times.

4. Property Owners desire that the Floodgate be maintained in the open position in order to alleviate the high water on the Property during the normal dry season from summer through fall.

5. Iberville Parish recognizes that the operation of the Floodgate affects the natural drainage of the Spanish Lake Basin and east Iberville Parish at certain times. Iberville Parish agrees to maintain the Floodgate in the open position at all times hereafter, except during backwater flooding situations (as defined hereinafter), with the goal of maximizing the natural drainage of water.

6. In addition to backwater flooding situations, the following shall be exceptions to the obligation(s) set forth in paragraph 5:

- a. Entry of a valid Order of a Court of competent jurisdiction directing Iberville Parish to close the Floodgate;
- b. In all emergency circumstances to protect life and property of Iberville and surrounding residents.
- c. To comply with any state or federal regulations; and/or,
- d. By Order of any state or federal agency, acting with proper authority, directing Iberville Parish to close the Floodgate.

7. Upon execution of this Agreement by all parties, Property Owners hereby waive, relinquish and expressly release, acquit and forever discharge Iberville Parish, its successors, representatives, agents, officers, employees, council members and other elected



officials, of and from any and all claims, demands, causes of action and rights of action whatsoever, which Property Owners may or might have and/or which may hereafter accrue to them, known and unknown, foreseen and unforeseen, including but not limited to, any and all claims, demands, causes of action and rights of action which Property Owners may or might have for any Property damage, including but not limited to, damage, destruction, loss, diminution and/or reduction in value to any and all lands, bodies of water, soils, fruits, crops, or trees, loss of use of property (commercial, business, personal, private, recreational or other), restoration costs, preservation costs, damages due to trespass, cleanup costs, loss of income or revenue, loss of commercial or business opportunity, and loss of value of land arising out of, related to, or resulting from the operation of the Floodgate prior to the execution of this Agreement. This express waiver and release also includes any and all other damages and other items or theories of recovery whatsoever, including but not limited to, penalties, attorney's fees, punitive damages, inconvenience, annoyance, mental distress, and stigma damages to which Property Owners may be or might become entitled and all other rights whatsoever in any way arising out of, related to, or resulting from the operation of the Floodgate prior to the execution of this Agreement.

8. By execution of this agreement, Iberville Parish and the Property Owners do not waive any rights or defenses of any kind or nature not specifically stated herein. Property Owners specifically reserve any future claims, demands, causes of action and rights of action whatsoever which Property Owners may or might have and/or which may hereafter accrue to them in any way arising out of, related to, or resulting from the operation of the Floodgate subsequent to the execution of this Agreement.

9. The Parish and Property Owners do hereby bind and obligate themselves and their heirs, executors, administrators, representatives, successors, assigns, parent corporations, subsidiaries, stockholders, owners, general partners, limited partners, officers, directors, agents and employees.

a. This Agreement, in addition to a personal contractual agreement is, to the extent permitted by law, a granting of a predial servitude of drainage by Iberville Parish as owner of the floodgate to the owners of the Property as described herein and is to run with the land, in accordance with Louisiana Civil Code articles 646, et seq.



10. "Backwater flooding" shall be defined as upstream flooding caused by downstream conditions such as channel restriction, high flow in downstream confluence streams, high tide, and/or prevailing headwinds that prevent downstream water flow or force water upstream.

11. This Agreement shall inure solely to the benefit of the parties hereto and their respective heirs, successors and assigns, including any purchasers from any Property Owner(s) identified herein, and not to the benefit of any third parties.

12. This Agreement shall be governed by the laws of the state of Louisiana. If any provision of this Agreement or the application thereof to any person or circumstance is, for any reason, and to any extent, held to be invalid or unenforceable under applicable law, then such provision will be deemed limited or modified to the extent necessary to make the same valid and enforceable under applicable law. Any invalid or unenforceable provision shall be replaced with such new provision which will allow the parties to achieve the intended result in a legally valid and effective manner.

13. In the event Property Owners consider that Iberville Parish has failed to comply with one or more of its obligations hereunder, either expressed or implied, Property Owners shall give written notice to Iberville Parish, through its Parish President, setting out specifically the manner Property Owners claim Iberville Parish has breached this Agreement. If within thirty (30) days after receipt of such notice, Iberville Parish shall correct or commence to correct the breach(es) alleged by Property Owners, Iberville Parish shall not be deemed in default hereunder. Neither corrective action taken by Iberville Parish, nor its failure to so act, shall be deemed an admission or presumption that Iberville Parish has failed to perform any of its obligations hereunder.

a. In accordance with the above provisions and upon expiration of the thirty (30) days, Property Owners specifically reserve any and all rights to pursue any legal remedies available under the law, including but not limited to, injunctive relief.

14. This Agreement contains the entire Agreement between the parties relating to the rights herein granted and the obligations herein assumed. No waiver, modification or amendment of any of the provisions of this Agreement shall be binding unless it is in writing and signed by the duly authorized representatives of all parties.



15. This Agreement is the result of open and extended negotiations between the parties hereto, each party having contributed toward the drafting hereof, directly and/or by counsel. To the greatest extent allowed by law, there shall be no application of the rule of construction of documents against the drafter.

16. This Agreement and all related documents, including but not limited to, all drafts, copies, notes, and related correspondence (including e-mails), shall not be admissible into evidence at any deposition, hearing or trial in any litigation resulting from the operation of the floodgate, except to enforce any provision of this Agreement.

17. This Agreement may be executed in counterparts and shall be made effective upon the execution of all parties. Each such counterpart so executed shall have the same force and effect as an original instrument as if all of the parties to the aggregate counterparts had signed in the same instrument.

18. All notices pursuant to this Agreement shall be made in writing and delivered via certified U.S. Mail to the physical addresses as noted herein.

THUS DONE AND SIGNED by J. MITCHELL OURSO, President of Iberville Parish, in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on March 22, 2010.

WITNESSES:

John J. Clark  
Jedrick L. Murley

IBERVILLE PARISH

BY: J. Mitchell Ourso Jr.  
J. MITCHELL OURSO, JR.

Edward A. Songy, JR.  
NOTARY PUBLIC/NOTARY NO  
Printed Name BRN: 02121



THUS DONE AND SIGNED by JAY LeBLANC in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on March 22, 2010.

WITNESSES:

Courtney R. Yarbrough  
Courtney R. Yarbrough  
Lisa L. Francise  
Lisa L. Francise

SPANISH LAKE MITIGATION, LLC

BY:

JAY LeBLANC

Michelle O. Lorio St. Martin / #20930  
NOTARY PUBLIC/NOTARY NO.

MICHELLE O. LORIO ST. MARTIN  
Printed Name

THUS DONE AND SIGNED by RAMON JARRELL in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on MARCH 22, 2010.

WITNESSES:

Courtney R. Yarbrough  
Courtney R. Yarbrough  
Lisa L. Francise  
Lisa L. Francise

LAND INVESTMENTS OF LOUISIANA INC.

BY:

RAMON JARRELL, President

Michelle O. Lorio St. Martin / #20930  
NOTARY PUBLIC/NOTARY NO.

MICHELLE O. LORIO ST. MARTIN  
Printed Name



THUS DONE AND SIGNED by RAMON JARRELL in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on March 22, 2010.

WITNESSES:

Courtney R. Vambrough  
Courtney R. Vambrough  
Lisa L. Francise  
Lisa L. Francise

JARRELL HOLDINGS, LLC

BY:

Ramon Jarrell  
RAMON JARRELL, President

Michelle O. Lorio St. Martin / #20930  
NOTARY PUBLIC/NOTARY NO.

MICHELLE O. LORIO ST. MARTIN  
Printed Name

THUS DONE AND SIGNED by SCOTT P. NESBIT, in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of Iberville, State of Louisiana, and the undersigned competent witnesses on MARCH 22, 2010.

WITNESSES:

Lisa L. Francise  
Lisa L. Francise  
Courtney R. Vambrough  
Courtney R. Vambrough

SPANISH LAKE RESTORATION, L.L.C.

By: Conservation Land Management, L.L.C.,  
Its Manager

By:

Scott P. Nesbit  
SCOTT P. NESBIT, Manager

Michelle O. Lorio St. Martin / #20930  
NOTARY PUBLIC/NOTARY NO.

MICHELLE O. LORIO ST. MARTIN  
Printed Name



12045 5 01 201

THUS DONE AND SIGNED by LEONARD R. NACHMAN in the presence of the undersigned notary public, duly commissioned and qualified in and for the Parish of East Baton Rouge, State of Louisiana, and the undersigned competent witnesses on March 19, 2010.

WITNESSES:

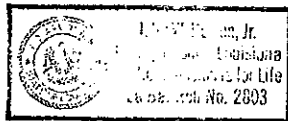
FIRST LOUISIANA RESOURCE, INC.

Mary L. Brand  
MARY L. Brand  
Diana O. Parker  
Diana O. Parker

BY: Leonard R. Nachman  
LEONARD R. NACHMAN, Manager

John W. Barton Jr.  
NOTARY PUBLIC/NOTARY NO.

JOHN W. BARTON JR.  
Printed Name





## EXHIBIT A

STATE OF LOUISIANA  
PARISH OF IBERVILLE

## RESOLUTION IPC# 2010- 007

A RESOLUTION ADOPTING THE SPANISH LAKE/ALLIGATOR  
BAYOU FLOODGATE DRAINAGE AGREEMENT; AND  
AUTHORIZING THE PRESIDENT TO EXECUTE THE SPANISH  
LAKE/ALLIGATOR BAYOU FLOODGATE DRAINAGE  
AGREEMENT

The following resolution was introduced by Councilman Taylor and seconded by Councilman Kelley.

WHEREAS, until the opening of the Alligator Bayou floodgate on or about March 24, 2009, the waters within the Spanish Lake Sub-Basin have been artificially maintained at unnaturally high levels causing prolonged flooding and high water in the sub-basin and surrounding areas;

WHEREAS, the Iberville Parish Council recognizes that in order to continue protection of life and property in the Spanish Lake Sub-Basin and affected areas, it is necessary to allow for the natural drainage of the Spanish Lake Sub-Basin, by operating the Alligator Bayou floodgate in the open position under normal circumstances as addressed in Ordinance Number 2009-014;

WHEREAS, certain property owners within the Spanish Lake Sub-Basin have requested Iberville Parish establish specific protocol for the future operation of the floodgate;

WHEREAS, Iberville Parish Council recognizes that there is a need to develop a comprehensive plan for the continued operation of the Alligator Bayou floodgate for the protection of life and property;

NOW, THEREFORE, BE IT RESOLVED, that the Spanish Lake/Alligator Bayou Floodgate Drainage Agreement attached hereto and made a part hereof, be hereby officially adopted and is to be used for the continued operation of the Alligator Bayou floodgate;

BE IT FURTHER RESOLVED, that the President is hereby authorized to execute the attached Spanish Lake/Alligator Bayou Floodgate Drainage Agreement:

The above resolution was duly adopted in regular session this 16<sup>th</sup> day of March, 2010, by the following vote on roll call;

YEAS: Taylor, Ourso, Scott, Reeves, Kelley, Vallet, Jewell, Roy.

NAYS: None.

ABSENT: Jackson, Butler, Oubre, Bradford.

The resolution was declared adopted by the Chairman on the 16<sup>th</sup> day of March, 2010.

## IBERVILLE PARISH COUNCIL

BY:   
EUGENE P. STEVENS, JR., CHAIRMAN

ATTEST:

  
KIRSHA D. BARKER  
COUNCIL CLERK



## CERTIFICATE

I, Kirsha D. Barker, do hereby certify that I am the duly qualified and appointed Council Clerk of the Parish Council, Parish of Iberville, State of Louisiana.

I further certify that the above constitutes a true and correct copy of a resolution adopted by the Iberville Parish Council in regular session on the 16<sup>th</sup> day of March, 2010.

IN FAITH WHEREOF, witness my official signature and the impress of the official seal of the Parish of Iberville, State of Louisiana, on this 16<sup>th</sup> day of March, 2010.



KIRSHA D. BARKER  
IBERVILLE PARISH COUNCIL CLERK

**SPANISH LAKE/ALLIGATOR BAYOU FLOODGATE  
DRAINAGE AGREEMENT**

Before the undersigned notaries, duly commissioned and qualified in and for the Parish(es) and State hereinafter set forth, and before the undersigned competent witnesses, personally came and appeared:

**The Iberville Parish Council**, herein represented by its Parish President, J. Mitchell Ourso, Jr., acting under the authority of Ordinance No. \_\_\_\_ adopted by the Iberville Parish Council, attached hereto and made a part hereof as Exhibit "A," having its principal place of business at 58050 Meriam Street, Plaquemine, Louisiana 70764 (hereinafter referred to as "Iberville Parish") and

**Spanish Lake Mitigation, L.L.C.**, a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 20104 Phillips Road, Baton Rouge, Louisiana 70817, herein represented by Manager, Jay LeBlanc; and

**Land Investments of Louisiana, Inc.**, a corporation organized under the laws of the State of Louisiana, having its principal place of business at 18019 East Augusta, Baton Rouge, Louisiana 70810, pursuant to a Resolution of its Board of Directors which was adopted at the meeting held on \_\_\_\_\_, a certified copy of which is annexed hereto as Exhibit "B" herein represented by President, Ramon Jarrell; and

**Jarrell Holdings, L.L.C.**, a limited liability company organized under the laws of the State of Louisiana, having its principal place of business at 18019 East Augusta, Baton Rouge, Louisiana 70810, herein represented by its President, Ramon Jarrell,

**Spanish Lake Restoration, L.L.C.**, a Louisiana limited liability company, organized under the laws of the State of Louisiana, having its principal place of business at 4664 Jamestown Avenue, Suite 400, Baton Rouge, Louisiana 70808, herein represented by its duly authorized Manager, Conservation Land Management, L.L.C., appearing herein through its duly authorized Manager, Scott P. Nesbit;

**First Louisiana Resource, Inc.**, a corporation organized under the laws of the State of Louisiana, having its principal place of business at \_\_\_\_\_, pursuant to a Resolution of its Board of Directors which was adopted at the meeting held on \_\_\_\_\_, a certified copy of which is annexed hereto as Exhibit "C", herein represented by its Manager, Leonard R. Nachman II; (hereinafter collectively referred to as "Property Owners").

For mutual consideration, Iberville Parish and the Property Owners hereby agree as follows:



EXHIBIT A (CONT'D)

1. Collectively, the Property Owners are the owners of approximately 8,000 acres of property located in the Spanish Lake Basin area, situated primarily in Iberville and Ascension Parish, Louisiana. The respective property owned by each Property Owner is described in Exhibit "D" in globo (hereinafter collectively referred to as the "Property").
2. Iberville Parish is the owner and operator of the Alligator Bayou Floodgate ("Floodgate") located at the convergence of Alligator Bayou and Bayou Manchac in Iberville Parish, Louisiana.
3. In the past, the Property has been subject to high water at certain times.
4. Property Owners desire that the Floodgate be maintained in the open position in order to alleviate the high water on the Property during the normal dry season from summer through fall.
5. Iberville Parish recognizes that the operation of the Floodgate affects the natural drainage of the Spanish Lake Basin and east Iberville Parish at certain times. Iberville Parish agrees to maintain the Floodgate in the open position at all times hereafter, except during backwater flooding situations (as defined hereinafter), with the goal of maximizing the natural drainage of water.
6. In addition to backwater flooding situations, the following shall be exceptions to the obligation(s) set forth in paragraph 5:
  - a. Entry of a valid Order of a Court of competent jurisdiction directing Iberville Parish to close the Floodgate;
  - b. In all emergency circumstances to protect life and property of Iberville and surrounding residents.
  - c. To comply with any state or federal regulations; and/or,
  - d. By Order of any state or federal agency, acting with proper authority, directing Iberville Parish to close the Floodgate.
7. Upon execution of this Agreement by all parties, Property Owners hereby waive, relinquish and expressly release, acquit and forever discharge Iberville Parish, its successors, representatives, agents, officers, employees, council members and other elected officials, of and from any and all claims, demands, causes of action and rights of action whatsoever, which Property Owners may or might have and/or which may hereafter accrue to them, known and unknown, foreseen and unforeseen, including but not limited to, any and all claims, demands, causes of action and rights of action which Property Owners may or might have for any Property damage, including but not limited to, damage, destruction, loss, diminution and/or reduction in value to any and all lands, bodies of water, soils, fruits, crops, or trees, loss of use of property (commercial, business, personal, private, recreational or other), restoration costs, preservation costs, damages due to trespass, cleanup costs, loss of income or revenue, loss of commercial or business opportunity, and loss of value of land arising out of, related to, or resulting from the operation of the Floodgate prior to the execution of this Agreement. This express waiver and release also includes any and all other damages and other items or theories of recovery whatsoever, including but not limited to, penalties, attorney's fees, punitive damages, inconvenience, annoyance, mental distress, and stigma damages to which Property Owners may be or might become entitled and all other rights whatsoever in any way arising out of, related to, or resulting from the operation of the Floodgate prior to the execution of this Agreement.
8. By execution of this agreement, Iberville Parish and the Property Owners do not Waive any rights or defenses of any kind or nature not specifically stated herein. Property Owners specifically reserve any future claims, demands, causes of action and rights of action whatsoever which Property Owners may or might have and/or which may hereafter accrue to them in any way arising out of, related to, or resulting from the operation of the



Floodgate subsequent to the execution of this Agreement.

9. The Parish and Property Owners do hereby bind and obligate themselves and their heirs, executors, administrators, representatives, successors, assigns, parent corporations, subsidiaries, stockholders, owners, general partners, limited partners, officers, directors, agents and employees.

a. This Agreement, in addition to a personal contractual agreement is, to the extent permitted by law, a granting of a pre-dial servitude of drainage by Iberville Parish as owner of the floodgate to the owners of the Property as described herein and is to run with the land, in accordance with Louisiana Civil Code articles 646, et seq.

10. "Backwater flooding" shall be defined as upstream flooding caused by downstream conditions such as channel restriction, high flow in downstream confluence streams, high tide, and/or prevailing headwinds that prevent downstream water flow or force water upstream.

11. This Agreement shall inure solely to the benefit of the parties hereto and their respective heirs, successors and assigns, including any purchasers from any property owner(s) identified herein, and not to the benefit of any third parties.

12. This Agreement shall be governed by the laws of the state of Louisiana. If any provision of this Agreement or the application thereof to any person or circumstance is, for any reason, and to any extent, held to be invalid or unenforceable under applicable law, then such provision will be deemed limited or modified to the extent necessary to make the same valid and enforceable under applicable law. Any invalid or unenforceable provision shall be replaced with such new provision which will allow the parties to achieve the intended result in a legally valid and effective manner.

13. In the event Property Owners consider that Iberville Parish has failed to comply with one or more of its obligations hereunder, either expressed or implied, Property Owners shall give written notice to Iberville Parish, through its Parish President, setting out specifically the manner Property Owners claim Iberville Parish has breached this Agreement. If within thirty (30) days after receipt of such notice, Iberville Parish shall correct or commence to correct the breach( es) alleged by Property Owners, Iberville Parish shall not be deemed in default hereunder. Neither corrective action taken by Iberville Parish, nor its failure to so act, shall be deemed an admission or presumption that Iberville Parish has failed to perform any of its obligations hereunder.

a. In accordance with the above provisions and upon expiration of the thirty (30) days, Property Owners specifically reserve any and all rights to pursue any legal remedies available under the law, including but not limited to, injunctive relief.

14. This Agreement contains the entire Agreement between the parties relating to the rights herein granted and the obligations herein assumed. No waiver, modification or amendment of any of the provisions of this Agreement shall be binding unless it is in writing and signed by the duly authorized representatives of all parties.

15. This Agreement is the result of open and extended negotiations between the parties hereto, each party having contributed toward the drafting hereof, directly and/or by counsel. To the greatest extent allowed by law, there shall be no application of the rule of construction of documents against the drafter.

16. This Agreement and all related documents, including but not limited to, all drafts, copies, notes, and related correspondence (including e-mails), shall not be admissible into evidence at any deposition, hearing or trial in any litigation resulting from the operation of the floodgate, except to enforce any provision of this Agreement.

17. This Agreement may be executed in counterparts and shall be made effective upon the execution of all parties. Each such counterpart so executed shall have the same